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ABSTRACT

This study sought to construct a set of family strengths using data from the National Longitudinal Survey of Youth - Child Supplement (NLSY-CS), and, if the family strengths' construct was possible, to discern whether the presence of these family strengths predict better outcomes for children. The original NLSY sampled approximately 12,000 children, ages 14 to 21, in 1979; subjects have been surveyed every year since. The current analysis uses data from 1986 and 1988 to predict 1990 child behavior outcomes. The 1990 data come from 2 groups of children, the first including 277 six- to nine-year-olds, and the second, involving 1,163 ten- to fourteen-year-olds. Findings indicate that in both age samples there is considerable variability in the influence of family strength measures, and no significant difference in results across gender, racial/ethnic, or structural family lines. While it appears that children in families with higher family strength levels have fewer behavioral problems, the degree of statistical significance is modest among the younger children and lower among the older ones. Results, however, do point to a positive correlation between family strengths and fewer behavioral problems, especially when mother-partner measures are involved. Results suggest that additional studies are merited. (Two appendices list child outcomes and family well-being indicators; 28 tables graph family strength data. Contains 13 references.) (JC)

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Assessing Family Strengths in the National Longitudinal Survey of Youth - Child Supplement

July, 1993

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Family Strengths and Behavioral Problems

The last quarter century has seen dramatic changes in American families -- increased rates of divorce, decreased rates of marriage, lower rates of fertility, higher rates of out-of-wedlock births, and increased rates of labor force participation among married women with children. These changes have prompted many to redefine "family" and to re-examine the conditions and behavior patterns that contribute to the wellbeing and behavior of children. In 1990, the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services convened a conference to examine research on successful families. Evidence from this conference and a review of the multidisciplinary literature suggests that successful families are characterized as enduring, cohesive, affectionate, mutually appreciative, and able to communicate with one another frequently and fruitfully (Krysan, Moore, and Zill, 1990). It is reasonable to expect that children raised in strong families will have more positive adjustment than those reared in families lacking these positive qualities. However, the review of the existing literature indicated that studies completed to date tended to be based on geographically delimited samples, they generally failed to control for confounding social and economic variables, and often based conclusions on results from self-selected participants.

While these initial studies identified a number of intuitively reasonable constructs that might affect children, the review revealed a clear need to test the utility of these constructs with randomly-selected representative longitudinal data. This is a challenging task because no existing representative data base has sought to systematically measure

the set of "family strengths" constructs. However, most data bases contain some measures of family processes and several contain moderately rich measures. One of these, the National Longitudinal Survey of Youth - Child Supplement (NLSY-CS) is examined in this paper.

The present analysis has two goals. First, our aim is to examine the feasibility of constructing measures of strong, well-functioning families using data from an existing national longitudinal data set, the NLSY-CS. Once these "family strength" constructs are created, our second goal is to examine whether the presence of family strengths predict to better outcomes for children. More specifically, we seek to answer six substantive questions:

- Given that a set of constructs that exemplify successful families have been identified in small-scale and local studies, is it possible to construct indicators of well-functioning families using an extant, nationally representative data set? Do the measures have reasonable psychometric properties?

- Does the presence of family strengths as measured by these indicators differ across population subgroups?

- Do different aspects of family strengths tend to occur together? That is, do families that tend to score high on one indicator also tend to score high on the others?

- Do the family strengths variables predict to fewer behavior problems among children?

- If positive associations between family strengths and child outcomes are found, do these relationships remain significant after controlling for other characteristics of the children and their families?

- Does the relationship between family strengths measures and children's behavior problems vary by racial/ethnic and family structure subgroups?

- If there are statistically significant associations between family strengths indicators and children's behavior problems, are they attributable to sample selection?

The Data

We use data from the National Longitudinal Survey of Youth-Child Supplement (NLSY-CS) for the current analysis (see Baker and Mott, 1989). The original NLSY was a sample of approximately 12,000 males and females aged 14 to 21 in 1979. These youth have been surveyed annually since 1979. In 1986, child development data were collected on the children born to female respondents in the NLSY to create a large, nationally representative data resource for the study of child outcomes. The child assessment measures, now available for 1986, 1988, and 1990, were linked with socioeconomic, family background, and marital history data reported by NLSY respondents from 1979 through 1988.

Since the NLSY data were originally collected to study the education and labor market experiences of a contemporary cohort of youth, the data set is rather limited in the availability of family process measures. Consequently, we attempt to draw from both the mother and child instruments in order to operationalize constructs that could be argued to be indicators of family strengths. We are guided by the work previously done by Krysan, Moore, and Zill (1990) and Zill and Rhoads (1990) using the National Survey of Children. The indicators we develop relate to the amount of appreciation and communication between parents and children; the frequency of activities and outings engaged in by the family, and a measure of the family's social connectedness or contact

with relatives and friends. Since one of the objectives of our analysis is to examine the appropriateness of these measures across racial/ethnic and family type subgroups, we analyze data separately for whites and blacks, for boys and girls, and for children in continuously married, never-married, and separated or divorced families.

In addition to the factors intended to tap "family strengths", we develop several additional indicators which are believed to influence the development of children, including the types of discipline used and the expectations that parents have for their children's contribution to the household. Unfortunately, we are limited by the data to measures that tap the use of harsher forms of punishment, such as spanking or grounding, and lack indicators of other disciplinary styles. Finally, we develop several measures of mother-partner relationship quality -- the degree of conflict present between the mother and her husband or partner, her level of satisfaction with the relationship, and the type of communication they have. Parenting and marital quality measures have previously been found to affect child and family wellbeing (e.g., Peterson and Zill, 1986; Amato, Spencer, and Booth, 1993).

Clearly, the indicators of family functioning we are able to construct from the NLSY-CS are neither exhaustive nor ideal. Our goal is to examine their psychometric properties and to determine whether even somewhat rudimentary measures such as these will be predictive of children's behavior problems.

Indicators of Well-Functioning Families

An overview of the indicators of well-functioning families developed using the NLSY-CS is presented below. Appendix A contains details about the precise coding of each indicator. Higher scores reflect what is regarded as more positive family functioning.

Family Strengths

- **Appreciation (Mother-Reported)**
  The frequency with which the mother shows praise to the child for doing something worthwhile, shows physical affection to the child, or tells another adult something positive about the child.

- **Interviewer-Rated Parent-Child Communication**
  The amount and type of communication between parent and child as observed by the interviewer during the 1988 interview.

- **Family Discusses TV**
  An indicator of whether the child's parents discuss television programs with him/her. (1=yes)

- **Family Activities (Child-Reported)**
  The frequency with which parents and children ages 10 or older engage in joint activities such as going to the movies or out to dinner.

- **Family Outings**
  The frequency with which family members took children ages 6 to 9 to a museum or to the theater in the past year.

- **Social Connectedness**
  Children's reports of the frequency with which their families visit friends and relatives.

- **Parent-Child Communication (Child-Reported)**
  Extent of communication between parents and children among children ages 10 to 14 about establishing rules, talking over important issues, and listening to the child's side of the argument.

o **Discussion of Sex with Parents**
Indicator of whether children ages 10 to 14 report discussing sex with their parents. (1=yes)

o **Child's Religious Attendance**
Frequency of religious attendance reported by children ages 10 to 14.

Discipline Measures

o **Parental Attitude toward Harsh Punishment**
Parental inclination to use grounding or spanking in response to the child saying "I hate you" to the parent or bringing home a report card with lower than expected grades.

o **Chores (Mother-Reported)**
The frequency with which the child is expected to perform activities such as making his/her bed and helping to keep shared living areas tidy.

o **Rules/Chores (Child-Reported)**
The extent to which the child is expected to perform particular chores such as straightening their rooms and doing the dishes.

o **Child Spanked at Least Once in Prior Week**
Mother's report of whether the focal child was spanked one or more times during the previous week. (1=yes)

o **Monitoring/Supervision (Child-Reported)**
The extent to which parents of children ages 10 or older make the decisions about which friends to go out with, how late the child can stay out, and how much TV he/she can watch.

Mother-Partner Measures

o **Relationship Satisfaction**
Mother-reported satisfaction with her relationship with her husband or partner.

o **Conflict with Partner (Mother-Reported)**
Mother's reports of the degree of conflict she has with her spouse/partner across various topics such as, chores, children, and money.

- **Parent-Partner Communication (Mother-Reported)**
  Frequency with which mother and her spouse or partner calmly discuss something, laugh together, and tell each other about their day.

- **Parental Agreement About Child**
  Indicator of whether children ages 10 to 14 feel that their parents tend to agree in dealing with them. (1=yes)

Analytic Strategy

We employ a prospective design in which 1986 and 1988 characteristics of children and their families are used to predict to 1990 child behavior outcomes. Because it is possible to operationalize a greater number of family strengths constructs using the additional data from children who were at least 10 years old in 1988, we perform analyses separately on two different age groups -- 10 to 14 year olds and 6 to 9 year olds. The sample we use in our multivariate analyses consists of a total of 277 children ranging in age from 10 to 14 in 1988 who were also assessed in 1990, and 1163 children ages 6 to 9 in 1988 who were reassessed in 1990.

To examine subgroup differences in the relationship between family strengths and child behavior problems, we examine results separately by gender of the child, race/ethnicity, and family structure. We draw from marital history information available from the main NLSY surveys and from household records to construct measures of detailed family types for children, including: child lives with continuously married parents, lives with a never-married mother; experienced parental divorce or separation; and experienced parental death.

Limitations

Since the child subsample is drawn from a survey of women aged 14 to 21 in 1979, these children are not a nationally representative sample of children. Rather, the sample of children overrepresents those born to young mothers. This is particularly true among the older children, all of whom were born when their mothers were still in their teen years. Consequently, as shown in the descriptive data presented in Table 1, the children in this sample tend to be disproportionately socioeconomically disadvantaged.

Among the 10 to 14 year old age group, the average child has spent 43 percent of the previous five years in poverty. Their computed poverty level averages 38 percent in 1988. The mothers of children in this age group tend to be very young, as described above, with an average age at first birth of 17.3 years. Moreover, the mother' educational attainment is lower than the national average. In this sample the mother's educational level averages 10.8 years, whereas nationally the average is 12.6 years for women 25 years old or older.[1] Blacks are also overrepresented in this sample -- 31 percent compared to 12 percent of the population as a whole in 1988.[2] While the sample of 6 to 9 year olds is less disadvantaged overall than the older age cohort, the average youngster in this group spent 36 percent of the previous five years in poverty. The average rate of poverty is 32 percent in 1988. This compares with a national

[1]U.S. Bureau of the Census, Statistical Abstract of the United States: 1990 (110th edition.) Washington, DC, 1990, Table 217.

[2]IBID, Table 19.

average of 19.2 percent of related children in families below the poverty level in 1988.[3] In addition, the average age of the mother at first birth is 19.1 years in this sample. Although substantially older than the mothers of the 10 to 14 year olds, there are no women in either sample who were in their late twenties or thirties when they became mothers.

Development and Evaluation of Family Strengths Indicators

- *Is it possible to construct indicators of well-functioning families using an extant, national data set? Do the measures have reasonable psychometric properties?*

Our first step is to explore the feasibility of creating measures of family strengths using the NLSY-CS, including single items and indices. As mentioned previously, due to differences in item availability, we construct measures separately for 6 to 9 year olds and 10 to 14 year olds in 1988. Some of the measures are composed of identical items, in which case the name of the index is the same, however in other cases the same components are not available. Appendix A provides a detailed description of the coding of the selected indicators.

We next assess item variability and reliability separately by age group. We explored alternative coding strategies for some of our indices and selected those with the most favorable psychometric properties. Appendix B provides a summary of the results when alternative (and less satisfactory) coding strategies are used. The distributional

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[3]U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 166, Money Income and Poverty Status in the United States: 1988, U.S. Government Printing Office, Washington, DC, 1989, Table 19.

and psychometric properties of our family strengths indices are summarized in Tables 2 and 3. Note that only *multiple-item indices* were factor analyzed. Dummy-coded items, such as whether the child was spanked in the previous week in 1988, and quasi-continuous single variables, such as how often the child reports seeing relatives or family friends are not appropriate for factor analysis.

The items making up each index are entered into a principal components analysis, a form of factor analysis. Since the extracted (unrotated) factor matrix should have the following properties if the set of items is indeed measuring a single phenomenon, we used them as our assessment criteria:

> a) there should be only one factor extracted, or, if there is more than one, the first factor should explain a large proportion of the variance in the items (around 40 percent or more);
>
> b) subsequent factors should explain fairly equal proportions of the remaining variance;
>
> c) all or most of the items should have substantial loadings (.30 or more) on the first factor;
>
> d) all or most of the items should have higher loadings on the first factor than on subsequent components (Carmines and Zeller, 1979).

The results of the principal components analysis provide the basis for computing an index, Cronbach's alpha, that estimates the internal-consistency reliability of the indices based on the component items. Cronbach's alpha is the most suitable measure of reliability because it is intended for indices which sum equally weighted items. Alpha, is calculated from the eigenvalue (sum of the squared loadings) of the first unrotated factor. In survey-based research using composite indices constructed from relatively few

items, the reliability of an index is considered to be acceptable if it has a alpha value of .60 or more. However, Nunnally (1978) suggests that in hypothesized measures of a construct, a satisfactory level of reliability is .70 or higher.

Results for Six to Nine Year Olds

Based on the above criteria, five of the seven indices we developed for 6 to 9 year olds prove to have satisfactory psychometric properties (see Table 2). These are appreciation, interviewer-evaluated parent-child communication, mother-reported rules and chores, parent-to-parent communication, and family outings. Each of these five measures produces only a single factor, on which all of the items load at least 0.30. In addition, all have acceptable reliability indices, .84, .73, .72, .73, and .63, respectively.

The psychometric properties of the other predictor indices for 6 to 9 year olds, the harsh punishment and conflict indices, prove to be less satisfactory. The reliability of the harsh punishment index, .45 is poor. While the reliability of the conflict index is acceptable at .74, factor analyses produces three factors. Although the first factor is the largest, it explains only 32.6 percent of the variance in the items.

In addition to the *indices* we developed, we also explore the following *single items* for 6 to 9 year olds: whether the family discusses TV, how often the child reports seeing relatives or friends, and whether child was spanked at least once in the prior week.

In addition to our examination of individual indices, we also explore the possibility of creating an overall family strengths index. We factor-analyzed an index consisting of all of the family functioning indicators discussed above. Four factors are

extracted. The first is comprised of the mother-partner measures, of which all three component variables have acceptable factor loadings (i.e. .68 or higher). The second factor combines family outings, appreciation, social connectedness, and family discussion of TV. The third factor is comprised of spanking (.81) and interviewer-observed parent-child communication (-.55) -- two items that had not been hypothesized to be related conceptually. Finally, mother-reported rules remains by itself with a loading of (.89). Given that we have no theoretical basis upon which to treat these particular combinations of items as unified constructs, we opt instead to examine the indices and single items separately.

Results for Ten to Fourteen Year Olds

Among 10 to 14 year olds, only four of the 10 indices we develop demonstrate satisfactory psychometric properties (see Table 3). These are appreciation, interviewer-evaluated parent-child communication, mother-reported rules and chores, and parent to parent communication. Each of these four measures produces only a single factor, on which all of the items load at least .30. Furthermore, all have quite acceptable reliability indices, .84, .75, .84, and .69, respectively.

The other indices for 10 to 14 year olds -- parent-child communication (child report), harsh punishment, family activities, conflict, child-reported rules and chores and monitoring/supervision -- are less than ideal. The reliabilities of these measures are quite low, ranging from alpha equalling .34 to .55, with the exception of conflict which is acceptable at .72. However, as before, the factor analysis of the conflict index extracts

three factors, of which the first factor explains only 32 percent of the variance in the items. Parent-child communication, harsh punishment, and monitoring each produce only a single factor. The first factor for harsh punishment explains only 38.4 percent of the variance in the items. The other two measures meet the criteria for factor analysis evaluation, however they are rejected based on their low reliabilities. Both the family activities index and child-reported rules and chores extract more than one factor, but once again the first factor explains less than 40 percent of the variance in the items. Consequently, despite the greater availability of measures among the 10 to 14 year olds, these indicators generally prove to be less satisfactory than those developed for the younger age group. In addition, as was the case for the younger age group, a combined family strengths index proves unsatisfactory.

In addition to the *indices* we develop, we also explore the following single items for 10 to 14 year olds: whether the family discusses TV and whether the youth discusses sex with his/her parents as communication measures, how often the child reports seeing relatives or friends as a measure of social connectedness, whether child was spanked at least once in the prior week as a discipline measure, and the frequency of the youth's religious attendance as a religiosity variable.

Table 4 provides a summary of the results of our psychometric assessment of the variables. As shown, if measures of these family processes are considered important to include in national surveys further work is clearly necessary to develop more robust measures.

The Presence of Family Strengths Across Families

o *Does the presence of family strengths, discipline, and relationship quality indicators differ by subgroup?*

Tables 5 through 8 present mean family strengths for children in the 6 to 9 and 10 to 14 year old age groups separately by sex, race/ethnicity, and family structure. Standard deviations are shown in parentheses. As can be seen in these tables, there are no substantial differences in either the means or standard deviations across these various subgroups. Given substantial differences in socioeconomic status across these groups, the lack of differences in family process measures in this sample is potentially important. The lack of difference may reflect, of course, the disadvantaged nature of the sample, with less variation than found in a truly heterogenous national sample, or it may reflect poor measures. Alternatively, it may reflect the presence of family strengths that are unrelated to economic status, family structure, race, or ethnicity.

Relationships Among Family Strength Indicators

o *Do different aspects of family strengths tend to occur together? That is, do families that tend to score high on one indicator also tend to score high on the others?*

Six to Nine Year Olds

Among 6 to 9 year olds, the majority of family functioning measures are significantly correlated in the directions that would be expected; however, the magnitude of these correlations tend to be modest (Table 9). For example, those parents who express more appreciation to and about their children also tend to take their children on

outings, discuss TV programs, and to have favorable communication between mothers and partners. These same families are less likely to advocate harsh punishment (i.e. grounding or spanking) for dealing with temper tantrums or unexpectedly poor report cards. Not surprisingly, greater levels of mother-partner conflict are negatively associated with our measures of positive family functioning. These levels of correlation are reasonable, as one would not expect extremely high correlations across distinct constructs.

The highest correlations are observed among the set of mother-partner measures. For example, the correlation between relationship satisfaction and mother-partner communication is .44, while conflict is negatively associated with both marital satisfaction (r=-.34) and communication (r=-.25).

Ten to Fourteen Year Olds

Among 10 to 14 year olds, few of the correlations between family strengths measures are statistically significant, and in those cases where significant associations are observed, the magnitude tends to be small (Table 10). This may be attributable to either the smaller size of the older versus the younger sample or to differences in the appropriateness of these particular measures for children of different ages. The relationships between discipline measures and family strengths vary -- harsh punishment is negatively associated with appreciation, but positively (albeit weakly) associated with family discussions of television. Mothers who report greater expectations related to their children's contribution to household chores and responsibilities tend to express greater

appreciation for their children; however, mother-reported rules and chores are negatively associated with interviewer-evaluated parent-child communication.

As with the 6 to 9 age group, the mother-partner measures have the strongest associations. Again, the largest correlation (r=.52) is observed between marital satisfaction and mother-partner communication. In general, youth who report that their parents tend to agree when dealing with them also rate favorably on other indicators of well-functioning families. The conflict index is negatively correlated with most measures of family strengths and discipline, with the exception of harsh punishment.

In sum, in both age groups there is considerable variability in the strength of the family strengths measures. This may have ramifications for the predictive utility of the measures, which is the focus of the next section.

Relationship Between Family Strengths and Children's Behavior Problems

o *Do the family strengths variables predict to behavior problems among children?*

Having established that our family functioning indicators relate to each other in weak, but predictable ways, our next question is whether they predict to positive outcomes among children.

The NLSY-CS contains a number of measures of child behavior problems, from both the perspective of the child and the parent. While our primary focus is on the widely-used Behavior Problems Index, we also examine the relationship between family strengths and two child-reported outcomes:

Parent-reported

- **Behavior Problems Index (BPI)**
  The BPI is a 32-item scale for parent report of child behavior developed by Zill and Peterson (Zill, 1990) based on the earlier work of Achenbach, Rutter, Kellam, Langner, and others. The items selected for the scale have a demonstrated ability to discriminate children who had received clinical treatment from those who had not, and tap some of the more common behavior syndromes in young people, such as "acting out", distractable-hyperactive behavior, and depressed-withdrawn behavior. These types of behavior syndromes are tapped in the various subscales that can be created from the overall behavior problems index. The BPI was administered to children in both age groups.

Child-reported

- **Child-reported behavior problems/delinquency**
  Child-reported assessment administered to children ages 10 to 14 which determines the number of times in the last year in which the youth: stayed out later than his/her parents said they should; hurt someone badly enough to need bandages or a doctor; lied to his/her parents about something important; took something from a store without paying for it; damaged school property on purpose; got drunk; had to bring his/her parent(s) to school because of something he/she did wrong; skipped a day of school without permission; or stayed out at least one night without permission.

- **Self Perception Profile for Children (SPPC)**
  This is a self-reported scale that measures a child's sense of general self-worth and self competence in the domain of academic skills (Baker and Mott, 1989). The assessment contains two sub-scales, a global self-worth score and an academic competence score. Numerous studies have documented the importance of the Self Perception Profile scale as a predictor of important child outcomes and behaviors, for example, achievement motivation.

Tables 11 and 12 provide correlations among each of the family strengths measures and various child outcomes. For 6 to 9 year olds we examine the total BPI and its subscales, as well as the SPPC subscales. For 10 to 14 year olds, we examine the BPI and its subscales, the child-reported behavior problems/delinquency scale, and the SPPC subscales. As noted earlier, all family strength measures are assessed prospectively, approximately two years before the time the outcome variables were measured.

Six to Nine Year Olds

Among 6 to 9 year olds, the majority of family strengths measures are significantly associated with measures of child behavior problems and self concept (Table 11). Without exception, the relationships are observed in the expected directions. That is, measures of family strength are associated with lower levels of behavior problems in school-aged children. Moreover, our indicators of positive family functioning are positively associated with measures of self-worth and academic confidence in young children.

In accordance with previously documented negative associations between marital conflict and children's behavior problems (e.g., Forehand et al., 1988; Emery and

O'Leary, 1982), we find when mothers have greater satisfaction in their relationships and better communication with their partners, their children have lower BPI scores and more favorable SPPC ratings. Similarly, mother-parent conflict is significantly associated with elevated behavior problems and lower ratings of self-worth and academic competence.

Ten to Fourteen Year Olds

Far fewer of the correlations between family strength measures and child behavior outcomes achieve statistical significance among 10 to 14 year olds (Table 12). Only three of the measures -- whether the parents and child discuss TV, mother-reported rules, and mother-partner conflict -- are significantly associated with children's scores on the mother-reported BPI. However, a greater number of measures of family functioning, 6 out of 11, are related to child-reported behavior problems.

Children in families that discuss television programs tend to score lower on the BPI and to report engaging in problem behaviors such as vandalism or ignoring curfews less frequently. Child-reported behavior problems are also significantly associated with the amount of appreciation expressed toward them by their parents, the frequency with which the family visits relatives and friends, interviewer-reported communication, marital satisfaction, and mother-partner conflict. The sense of self-worth reported by the youth is significantly associated with the level and type of communication that the interviewer observed between the mother and child during the interview.

Differences for Boys and Girls

Among 6 to 9 year olds, there appears to be a stronger association between family strength measures and child behavior outcomes for girls than for boys (Table 13). In many cases, individual indicators of family strengths account for about twice the variance in BPI and SPPC scores for girls compared to boys. For example, the correlation between parental attitude toward harsh punishment and BPI is .09 for boys and .15 for girls. Interestingly, the measure of mother-reported rules is positively associated with scholastic competence among girls, but negatively associated with this item among boys.

Patterns for boys and girls are more similar among the 10 to 14 year olds (Table 14), but unlike the younger age-group, the associations between family strengths and child behavior problems are larger for boys than for girls.

Differences for Whites and Nonwhites

Among 6 to 9 year olds, fewer statistically significant associations are observed for nonwhites than for whites, and mother-reported rules work in opposite directions on the SPPC scholastic subscale for the two groups (Table 15). Whites with more mother-reported rules have lower scholastic competence, while nonwhites who are expected to contribute more around the household have higher SPPC scholastic ratings.

Similar patterns of statistically significant associations between family strengths and child outcomes are observed for most of the family strength variables among white and nonwhite 10 to 14 year olds (Table 16). However, the relationship between BPI

scores and the appreciation and harsh punishment measures work in opposite directions for the two groups.

Differences by Family Structure

Among 6 to 9 year olds in families where the parent has never married, few significant associations are observed between indicators of family functioning and the BPI or SPPC (Table 17). For this subgroup, mother-reported behavior problems are negatively associated with social connectedness and positively associated with harsh punishment. There are no significant associations between the SPPC scholastic subscale and family strengths among children of never married mothers. Surprisingly, the appreciation index is negatively associated with the SPPC self-worth subscale, but the other family functioning indicators significantly correlated with this subscale, family outings (r=.11), harsh punishment (r=-.19), mother's relationship satisfaction (r=.28) and mother-partner conflict (r=-.32), work in the expected directions.

Turning to the results for children in continuously married families and those whose parents' marriages disrupted between birth and the 1990 interview, we find greater numbers of significant associations between indicators of family functioning and child behavior outcomes. Aside from the greater number of significant relationships among those in intact versus disrupted families, there are other noteworthy differences in the predictability of family strengths indicators on outcomes for the two groups. The amount and type of appreciation that mothers express toward and about their children has twice the impact on the SPPC subscale for disrupted children as it does for children

whose parents remained married over the period. Similarly, the correlation between advocating harsh punishment in 1988 and BPI in 1990 is higher among children in the intact (r=.14) versus the disrupted group (r=.07). It is important to note that the number of statistically significant relationships observed for the continuously married group may be an artifact of the larger sample size.

Among 10 to 14 year olds, fewer of the associations between family functioning measures and child behavior outcomes are statistically significant in any of the family structure groupings than for the younger cohort (Table 18). While the observed correlations between mother-partner relationship measures and both mother- and child-reported behavior problems tend to be large, relatively few of the mothers of children in this age group have partners.

In contrast to the 6 to 9 year olds, a slightly greater number of significant associations were observed between family functioning indicators and child behavior problems among these older children in the disrupted as compared to the those in the intact group. This could reflect the small sample of continuously married parents among the older children. Interestingly, while when significant associations were observed for both subgroups in the younger age group, they tended to be similar in pattern (although the magnitude of the relationship was sometimes higher for the intact versus the disrupted group); this tends not to be the case for the 10 to 14 year olds. In a number of instances the relationship between a particular family strengths measure and a child outcome work in opposite directions for the two subgroups. For example, engaging in a variety of activities with one's parents reduces the BPI score of youth in continuously

married families, however, it tends to increase the BPI score of children whose parents have separated or divorced. Perhaps the interaction with a non custodial parent is a source of stress for these children. Similarly, having greater contact with friends and family members lowers the self-worth subscale score for those whose parents have remained together, but raises this score among children who have experienced separation or divorce. Because our analysis does not account for the temporal order of the family strengths measures and the occurrence of disruption, it would be inappropriate to place too much emphasis on the interpretation of these relationships.

Multivariate Analyses

- *If positive associations between family strengths and child outcomes are found, do these relationships remain significant after controlling for other characteristics of the children and their families?*

Having shown that indicators of family functioning are significantly and prospectively associated with positive child behavior outcomes, our next aim is to assess whether these associations remain important even after controls for other family characteristics are introduced. In other words, we need to establish that factors such as family structure, mother's educational level, family income, and number of children, which could arguably be related to the presence or absence of particular family strengths, do not explain the bivariate relationships that we have observed. To accomplish this, we use ordinary least squares regression to predict children's BPI scores and child-reported behavior problems/delinquency scores (among those 10 to 14 only) in

1990, controlling for a variety of demographic and socioeconomic characteristics of children and their families.

We account for the following characteristics of children that may jointly relate to the level of family strengths as well as to the level of behavior problems in 1990: sex (girl=1), age in months, whether the child is black, whether the child is Hispanic, birthweight in ounces, whether the child has a handicapping condition, the number of years the child spent in child care in their first three years of life, and the child's BPI score in 1986 -- measured prior to the timing of the family functioning indicators. In addition, we control for mother's education, net family income in 1988, the mother's age at the interview, the proportion of the previous five years spent in poverty, the number of children in the household in 1988, and three types of family structure (ever separated or divorced, never-married, and parental death). We impute the mean value for these control variables when missing in order to maximize our sample size.

For our multivariate analyses we use only the family functioning indices that demonstrate satisfactory psychometric properties (see Table 4), and as before, conduct our analyses separately by age group. Because the number of cases with non-missing data is smaller for mother-partner measures than for the family strengths and discipline measures, we present results separately for models with and without these items included. The first and third columns present the results including just the 1988 family functioning measures as predictors of child behavior problems in 1990, while the second and fourth columns provide results when socioeconomic and demographic controls are added.

Beginning with results for the 6 to 9 year olds (Table 19, column 1), we see that five of the seven family strengths and discipline measures achieve statistical significance in the model without controls. Greater levels of appreciation, family discussion of television programs, greater contact with friends and relatives, and greater expectations for children's contributions to household responsibilities all significantly lower mother-reported behavior problem scores among 6 to 9 year olds. The strongest positive effect on 1990 BPI scores was observed for children who were spanked at least once in the prior week in 1988 (.17). Only three of these measures remain statistically significant in the presence of controls for child and family characteristics -- appreciation, social connectedness, and spanking. It is noteworthy that most of these effects are not diminished notably in magnitude even when the child's level of behavior problems in 1986 is accounted for.

The results for mother-partner measures are shown in columns three and four. Interestingly, mother-partner communication significantly lowers children's BPI scores; however, adding this variable diminishes the importance of social connectedness, which had previously been observed to be statistically significant. Moreover, family outings (i.e., taking children to a museum or theater) lowers the level of behavior problems in this model. Once controls are added, the effects of spanking and mother-partner communication remain virtually the same, while the effect of appreciation increases slightly in both magnitude and significance and interviewer-evaluated mother-child communication becomes statistically significant (-.08).

Table 20 presents comparable results for 10 to 14 year olds. The amount and type of appreciation that mothers express to and about the child, family discussions of TV, and having been spanked in the prior week in 1988 are significant predictors of mother-reported behavior problems in 1990, net of controls (column two). The effect of discussions about TV is notably reduced in importance -- declining from -.19 to -.09 -- and the frequency of the child's attendance at religious services is no longer statistically significant after controls for other child and family factors are added. The effect of appreciation loses statistical significance when the mother-partner measures with controls are added (column four), but discussing TV and spanking remain important predictors. Unlike the case for the younger cohort, the mother-partner measures significantly predict to BPI scores in 1990 with only one exception. The more satisfied the mother is with her relationship with her spouse or partner, the lower the child's BPI rating, while inter-partner conflict increases the level of child behavior problems reported by mothers. Unexpectedly, youth who report that their parents tend to agree when dealing with them have more behavior problems. It may be that parents tend to be unified in their impressions of and approaches to youth showing greater levels of behavior problems than they are in response to youth who show less troublesome behaviors.

We turn now to the results for models where the child-reported behavior problems/delinquency index is treated as the dependent variable. As shown in Table 21, here we see greater consistency in the effects of family functioning measures with and without controls for child and family factors. Appreciation, discussion of TV, and spanking have consistent effects across all four of the models we estimated. While

having discussed sex with parents in 1988 has a positive effect on child-reported negative behaviors in 1990 (columns 1-3), this effect disappears in the full model (column 4) containing both mother-partner measures and controls.

Table 22 summarizes the results observed across both age groups in models including all of our family strength measures as well as controls. Having been spanked in 1988 is the only measure that has a consistent effect across both age groups and both outcomes we examined. As indicated by the standardized beta coefficients presented in Tables 19 through 21, the magnitude of this effect is relatively large. It is important to underscore that this is a prospective measure from 1988 being used to predict behavior problems in 1990. Moreover, the effect remains even after the child's level of behavior problems in 1986 is controlled. This finding would suggest that this harsh form of punishment has a stronger influence on the subsequent behavior of children than do more positive measures, at least as we are able to construct them.

Appreciation is the only other measure that was statistically significant for both age groups; however among 10 to 14 year olds it significantly predicts child-reported behavior but not the BPI. The discussion of TV programs with the child in 1988 by either the mother or father (figure) is a significant predictor of both the mother-reported and child-reported behavior outcomes we examined for 10 to 14 year olds, but did not prove to be predictive of the BPI among the younger age group. Perhaps this activity is more common when children are young, but as they grow older family discussion of TV programs may differentiate stronger families. Positive communication between the mother and child observed in 1988, such as the child being encouraged to talk, the

mother answering the child's questions and introducing the child by name, was negatively related to the BPI scores of 6 to 9 year olds, as was positive communication between their parents (or mother-partner). However, the other mother-partner measures only proved to be important predictors of the BPI scores for 10 to 14 year olds.

Differences by Subgroup

o *Does the relationship between family strengths measures and children's behavior problems vary by gender, racial/ethnic and family structure subgroups?*

Our next step is to explore whether the multivariate relationships we observed in the previous section for the total samples vary for specific subgroups -- for girls versus boys, whites versus blacks, and children whose parents were continuously married versus those whose parents divorced or separated. These results are presented in Tables 23 to .

Among both the 6 to 9 (Table 23) and 10 to 14 (Table 25) year old age groups there are somewhat more significant associations for girls than for boys between our measures of family strengths and children's behavior two years later, net of sociodemographic controls. Among younger girls, family discussion of TV and positive parental communication significantly lower BPI scores, while being spanked at least once in the previous week in 1988 is positively associated with behavior problems in 1990. Among 6 to 9 year olds boys, appreciation and interviewer-evaluated parent-child communication, both affective measures, are the only significant (negative) effects.

A greater number of family strength measures predict to the 1990 BPI scores among girls than boys in the older age group (Table 25). Appreciation, attendance at religious services, and discussing sex with parents have statistically significant negative effects, while the effect of being spanked in 1988 is significantly positive. Among the older boys, discussing sex with parents in 1988 is also negatively associated with the 1990 BPI score. Social contacts with relatives and friends also lowers the BPI score for boys.

Turning to our examination of differences by family structure, we find that among the 6 to 9 year olds (Table 24) there are some similarities between those in continuously married and disrupted families. Both parent-child appreciation and spanking are significantly associated with BPI scores -- the greater the appreciation expressed to the child the fewer the mother-reported behavior problems, while being spanked at least once in the past week at the time of the 1988 survey increases the child's 1990 BPI score. Furthermore, among those whose parents remained married throughout the period, interviewer-evaluated communication and family outings are negatively associated with BPI scores. Social connectedness lowers the BPI scores of children in separated or divorced families. No statistically significant associations between family strengths and children's behavior problems are observed among the 10 to 14 year olds in the continuously married group (Table 26).

We next examine race differences in the relationship between family strengths and children's behavior problems and find that only spanking among 6 to 9 year olds achieves statistical significance among African Americans (Tables 27 and 28). This is most likely due to the small number of cases available to us for these analyses. Because

of the small sample size we really can not justify comparing the results of whites with blacks.

Sample Selectivity

- *If there are statistically significant associations between family strengths indicators and children's behavior problems, are they attributable to sample selection?*

Because the presence of family strengths as we have operationalized them may be related to family structure, and membership in particular family types is based on a non-random process (i.e., families with particular attributes such as low education and low income have higher out-of-wedlock birth and disruption rates) it is important to examine whether this biases our results.

Our next step, therefore is to re-examine our results using sample selectivity into account. We address the problem of sample selectivity statistically by estimating selection models (Maddala, 1983) that attempt to take into account both observable and unobservable differences between the two groups. We first estimate a probit model that predicts membership into a continuously married family versus one in which a separation, death or divorce occurred, or in which the child's parents did not marry. We include the Inverse Mills Ratio, or hazard instrument, derived from this equation into our substantive equations.

The variables used as instruments in our probit equation are drawn from mother interviews and represent early attributes of the mother and her family of origin. Because several of the variables in our probit equation are not included in the substantive models

of child outcomes they serve as instrumental variables. We include grandfather's education because we argue that it affects the mother's educational attainment and family formation decisions and that any effect it may have on child outcomes is mediated through these variables. We include the mother's attitudes about women's family roles with the assumption that they relate to the probability of marriage and marital disruption, but have no direct effect on children's behavior problems. Mother's age at first birth is also used as an instrument because while it has been shown to be associated with marital disruption, it has at most a minimal *direct* effect on children's wellbeing. We include whether the mother lived in an intact family of origin at age 14, again arguing that this would affect the mother's life course, but would not directly relate to the child's 1990 BPI score. Finally, we include the mother's enrollment in a college preparatory program in high school, an indicator of whether her own mother worked when the respondent was 14, her education attainment, Armed Forces Qualifying Test (AFQT) aptitude score, her number of siblings, and the age at which she expected to marry.

Again we estimate models separately for 6 to 9 and 10 to 14 year olds. When we compare these results to previous ones we find that the family strengths coefficients tend to be about the same magnitude and to have generally the same level of statistical significance when we take selectivity into account. Moreover, the lambdas computed based on the correlation between the error terms in the probit and substantive equations are not statistically significant which also lends further support to our original findings.

Thus, we conclude that sample selectivity does not represent a significant problem for the present analysis of these data.

Summary and Conclusions

Our analysis has had two goals. Our first aim was to examine the feasibility of constructing measures of strong, well-functioning families using data from an existing national longitudinal data set, the National Longitudinal Survey of Youth - Child Supplement. Our second goal was to examine whether the presence of "family strengths" predicts to better outcomes for children.

We used a prospective design in which 1986 and 1988 characteristics of children and their families were used to predict to 1990 child behavior outcomes. We have performed our analyses separately on two different age groups -- 10 to 14 year olds and 6 to 9 year olds and have examined our results separately by gender of the child, race/ethnicity, and family structure.

While the NLSY-CS was not designed to allow for the creation of rich family process measures, we were able to operationalize several indicators of "family strengths." These relate to the amount of appreciation and communication between parents and children, the frequency of activities and outings engaged in by the family, and a measure of the family's social connectedness, or contact with relatives and friends. We also developed several indicators of disciplinary practices, including whether spanking is used and advocated and the expectations that parents have for their children's contribution to the household. Finally, we developed several measures of mother-partner relationship

quality -- the degree of conflict present between the mother and her husband or partner, her level of satisfaction with the relationship, and the type of communication they have.

We examined the psychometric properties of our measures and found that, especially among the younger age-group, most of the indices achieved satisfactory reliability levels and represented uniform constructs. Table 4 provides a summary of the results of our psychometric assessment of the variables. However, we were limited in terms of the breadth of measures related to family process and functioning due to the nature of the NLSY-CS surveys.

We found no substantial differences in either the means or standard deviations for our family strengths indicators across gender, race/ethnic and family structure subgroups. This lack of difference may relate to the fact that our sample is relatively disadvantaged and therefore less heterogenous than a typical national sample, or it may reflect poor measures. Alternatively, we argue that it may reflect the presence of family strengths that are unrelated to economic status, family structure, race, or ethnicity.

Our next step was to examine the extent to which various indicators of family strengths are predictive of one another. We were interested in whether, for example, a family that shows appreciation to children also has explicit expectations for them about household chores and other contributions.

We found that among 6 to 9 year olds, the majority of family functioning measures are significantly correlated in the directions that would be expected; however, the magnitude of these correlations tended to be modest. The highest correlations are observed among the set of mother-partner measures.

Among 10 to 14 year olds, few of the correlations between family strengths measures are statistically significant, and in those cases where significant associations were observed, the magnitude tended to be small. As with the younger age group, the mother-partner measures have the strongest associations --- the largest correlation was observed between marital satisfaction and mother-partner communication.

The question of primary substantive interest was whether the 1988 measures of family strengths we developed were predictive of children's behavior problems in 1990. We examined both mother-reported and child-reported outcomes.

Among 6 to 9 year olds, we found that the majority of family strengths indicators were significantly associated with measures of child behavior problems and self concept, and the relationships were observed in the expected direction. That is, the greater the presence of particular family strengths, the fewer the behavior problems in school-aged children. Moreover, our indicators of positive family functioning were positively associated with measures of self-worth and academic confidence in young children.

The present analysis also provided evidence that when mothers have greater satisfaction in their relationships and better communication with their partners, children have lower BPI scores and more favorable SPPC ratings. Similarly, mother-parent conflict was significantly associated with elevated behavior problems and lower ratings of self-worth and academic competence.

Far fewer of the correlations between family strength measures and child behavior outcomes achieved statistical significance among the 10 to 14 year olds. Only three of the measures -- whether the parents and child discuss TV, mother-reported rules, and

mother-partner conflict -- were significantly associated with children's scores on the mother-reported BPI. However, a greater number of measures of family functioning, six out of 11, were significantly related to child-reported behavior problems.

We investigated whether these bivariate relationships were different across various population subgroups and found that the associations were stronger for girls than for boys in the younger age group, but the reverse was true for the older age group.

We also observed a greater number of statistically significant associations between family strengths and children's behavior problems among whites than among blacks. In addition, there were also a greater number of significant associations among children in continuously married families. Both may be attributable to larger sample sizes for whites and those in intact families.

In addition to the greater number of significant associations among the continuously married group, there were other noteworthy differences. For example, among 6 to 9 year olds, the amount and type of appreciation that mothers express toward and about their children has twice the impact on the SPPC subscale for disrupted children as it does for children whose parents remained married over the period. Similarly, the correlation between advocating harsh punishment in 1988 and BPI in 1990 is twice as high among children in the intact versus the disrupted group.

The true test of the strength of these measures, however, is whether the significant associations observed between family strengths and children's behavior problems remain once other sociodemographic characteristics of children and their families are controlled.

We conducted multivariate analyses employing only those family strength measures with acceptable psychometric properties. We found that once sociodemographic characteristics of children and their parents such as family income and child's prior BPI score were statistically controlled, having been spanked in 1988 was the only measure that has a consistent effect across both age groups and both outcomes we examined, and the magnitude of this effect was relatively large. Appreciation was the only other measure that was statistically significant for both age groups; however among 10 to 14 year olds it significantly predicts child-reported behavior but not the BPI. The discussion of TV programs with the child in 1988 by either the mother or father (figure) is a significant predictor of both the mother-reported and child-reported behavior outcomes we examined for 10 to 14 year olds, but did not prove to be predictive of the BPI among the younger age group. Positive communication between the mother and child observed in 1988, such as the child being encouraged to talk, the mother answering the child's questions and introducing the child by name, was negatively related to the BPI scores of 6 to 9 year olds, as was positive communication between their parents (or mother-partner). However, the other mother-partner measures proved to be important predictors of the BPI scores only for 10 to 14 year olds.

Limitations in sample sizes make us cautious about inferring too much about subgroup differences in our multivariate results. Fewer family strengths coefficients achieved statistical significance among subgroups with smaller sample sizes, such as blacks and children in separated or divorced families. Moreover, it is unclear whether differences across the two age groups are simply due to small sample sizes for the 10 to

14 year olds, or to true differences in the effects by age. However, we re-estimated our substantive equations statistically accounting for selection into different family types and found that the non-random process that sorts individuals into single-parent versus two-parent families does not represent a significant problem for analysis of these data.

Because of the number of significant associations we uncovered between our somewhat rudimentary and limited indicators of family strengths and children's behavior problems, these analyses lend support to the need for additional work in this area. A necessary step, however, is developing better measures of family processes at the data collection stage. The most promising constructs appear to be those related to the amount and type of appreciation and affection that the parent shows the child and the type of communication they have. The most notable finding however, was for a variable that is not even officially defined as a "family strength" -- having spanked the child at least once in the prior week. When examined prospectively, this indicator has a sizable positive effect on the behavior problems of children two years hence, even when prior behavior problems are controlled. Further work which investigates the relative importance of other forms of discipline is clearly needed.

References

Amato, Paul R., Spencer, Laura, and Booth, Alan. 1993. Interparental conflict, divorce, and the transition to adulthood. Paper presented at the 1993 Annual Meeting of the Population Association of America, Cincinnati, Ohio.

Baker, Paula C. and Mott, Frank L. 1989. *NLSY Child Handbook 1989: A Guide and Resource for the National Longitudinal Survey of Youth 1986 Child Data*. Columbus, Ohio: Center for Human Resource Research, The Ohio State University.

Carmines, E. and Zeller, R. 1979. *Reliability and Validity*. Sage University Paper Series on Quantitative Applications in the Social Sciences, 07-017. Beverly Hills, CA: Sage Publications, Inc.

Emery, Robert E. and O'Leary, K. Daniel. 1982. Children's perceptions of marital discord and behavior problems of boys and girls. *Journal of Abnormal Child Psychology*. 10(1):11-24.

Forehand, Rex, McCombs, Amanda, Long, Nicholas, Brody, Gene, and Fauber, Robert. 1988. Early adolescent adjustment to recent parental divorce: The role of interparental conflict and adolescent sex as mediating variables. *Journal of Consulting and Clinical Psychology*. 56(4):624-627.

Krysan, Maria, Moore, Kristin. A., and Zill, Nicholas. 1990. *Research on Successful Families: A report on the Conference Sponsored by the Office of the Assistant Secretary for Planning and Evaluation U.S. Department of Health and Human Services*. Washington, D.C.: Child Trends, Inc.

Maddala, G.S. 1983. *Limited-Dependent and Qualitative Variables in Econometrics*. Cambridge: Cambridge University Press.

Nunnally, Jum C. 1978. *Psychometric Theory*. New York: McGraw-Hill Book Company.

Peterson, James L. and Zill, Nicholas. 1986. Marital disruption, parent-child relationships, and behavior problems in children. *Journal of Marriage and the Family*. 49: 295-307.

U.S. Bureau of the Census. 1990, *Statistical Abstract of the United States: 1990* (110th edition.) Washington, DC, Table 217.

U.S. Bureau of the Census. 1989, Current Population Reports, Series P-60, No. 166, *Money Income and Poverty Status in the United States: 1988*, U.S. Government Printing Office, Washington, DC, Table 19.

Zill, Nicholas and Rhoads, Amy. 1991. Assessing Family Strengths in a National Sample of Families with Adolescent Children. Progress Report. Washington, D.C.:Child Trends, Inc.

Zill, N. 1990. Behavior Problems Index Based on Parent Report. Washington, D.C.: Child Trends (November).

Table 1. Child and Family Background Characteristics, by Age Groups, Weighted

	6 to 9 Year Olds	10 to 14 Year Olds
Family Characteristics		
Average mother's education in years	12	11
Average mother's age at first birth	19	17
Average adjusted net family income	$23,450	$21,614
Average number of mother's children in household	2	3
Percent below poverty in 1986	32	38
Percent below poverty in 1988	31	39
Percent of previous 5 years spent in poverty	36	43
Average mother's age in 1988	29	30
Child Characteristics		
Sex (percent female)	48	50
Average age of child in months	93	141
Percent black	21	31
Percent Hispanic	10	10
Birth weight in ounces	117	113
Percent with handicapping condition	7	6
Average number of years in childcare during first 3 years of life	1	1
Average Behavior Problems Index (BPI) score in 1986	108	110

Note: 1. Table values (except N's) are based on weighted data.

Source: Child Trends, Inc. tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988, and 1990 waves.

TABLE 2. Analysis of Family Strength Measures among Children Ages 6 to 9.

DESCRIPTIVE STATISTICS

Measures	Number of Component Items	Range	Nominal Midpoint	Actual Mean	Standard Deviation
Appreciation	3	0 to 12	6.0	5.9	3.4
Intv.-Reported Communic.	4	0 to 4	2.0	3.4	1.0
Family Outings	2	0 to 8	4.0	1.9	1.5
Harsh Punishment	4	0 to 4	2.0	2.0	1.1
Mother-reported rules	5	0 to 5	2.5	3.0	1.6
Interparental Communic.[1]	3	0 to 9	4.5	8.1	1.5
Interparental Conflict	9	0 to 25	12.5	8.9	4.5

PRINCIPAL COMPONENT ANALYSIS

Measures	Alpha Reliability	Number of Factors Extracted	Percent of Total Variance Accounted for by Each Factor	Percent of Variance in All Factors Accounted for by First Factor	Number of Component Items Loading .30 or More on First Factor	Number of Component Items With Highest Loading on First Factor
Appreciation	.84	1	76.6%	100%	3 of 3	NA
Intv.-Reported Communic.	.73	1	58.0%	100%	4 of 4	NA
Family Outings	.63	1	72.9%	100%	2 of 2	NA
Harsh Punishment	.45	1	38.5%	100%	3 of 3	NA
Mother-reported rules	.72	1	47.0%	100%	5 of 5	NA
Interparental Communic.[1]	.73	1	66.2%	100%	3 of 3	NA
Interparental Conflict	.74	3	32.6%,12.7%,11.5%	57%	9 of 9	6 of 9

[1] Communic recoded into a collapsed version: COMMUN2 (Range= 0-3 Mean= 2.27 Std. dev.= 1.03).

Source: Child Trends, Inc. Tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988, and 1990 Waves.

Note: Figures are based on weighted data.

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TABLE 3. Analysis of Family Strengths Measures among Children Ages 10 to 14.

DESCRIPTIVE STATISTICS

Measures	Number of Component Items	Range	Nominal Midpoint	Actual Mean	Standard Deviation
Appreciation	3	0 to 12	6.0	5.9	3.6
Intv.-Reported Communic.	4	0 to 4	2.0	3.3	1.1
Family Activities	7	0 to 7	3.5	3.4	1.7
Parent-Child Communic.	3	0 to 7	3.5	3.2	1.7
Harsh Punishment	4	0 to 4	2.0	2.3	1.1
Mother-reported rules	6	0 to 6	3.0	3.7	2.1
Child-reported[2] rules	7	0 to 7	3.5	4.9	1.4
Monitoring (monitor)	3	0 to 3	1.5	1.7	0.9
Interparental Communic.[1]	3	0 to 9	4.5	7.9	1.6
Interparental Conflict	9	0 to 27	13.5	9.3	4.7

PRINCIPAL COMPONENT ANALYSIS

Measures	Alpha Reliability	Number of Factors Extracted	Percent of Total Variance Accounted for by Each Factor	Percent of Variance in All Factors Accounted for by First Factor	Number of Component Items Loading .30 or More on First Factor	Number of Component Items With Highest Loading on First Factor
Appreciation	.84	1	75.9%	100%	3 of 3	NA
Intv.-Reported Communic.	.75	1	57.7%	100%	4 of 4	NA
Family Activities	.55	2	27.2%,15.2%	64%	7 of 7	6 of 7
Parent-Child Communic.	.34	1	44.0%	100%	3 of 3	NA
Harsh Punishment	.42	1	38.4%	100%	4 of 4	NA
Mother-reported rules	.84	1	56.4%	100%	6 of 6	NA
Child-reported rules	.46	3	25.2%,18.1%,14.7%	44%	6 of 7	5 of 7
Monitoring (monitor)	.39	1	45.2%	100%	3 of 3	NA
Interparental Communic.	.69	1	63.1%	100%	3 of 3	NA
Interparental Conflict	.72	3	32.1%,13.4%,12.7%	57%	9 of 9	6 of 9

[1] Communication variable recoded into a collapsed version: (Range= 0-3 Mean=2.1 Std. dev.= 1.11).

[2] Child-reported rules recoded into a collapsed version: RULCMEAN: (Range= 0-2 Mean= .99 Std. dev.= .83).

Source: Child Trends, Inc. Tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988, and 1990 Waves.

Note: Figures are based on weighted data.

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Table 4. Summary of Psychometric Assessment of Family Functioning Measures, By Age Group

	Ages 6 to 9	Ages 10 to 14
Family Strengths		
Appreciation	*acceptable*	*acceptable*
Interviewer-evaluated communication	*acceptable*	*acceptable*
Family discussion of TV	single item	single item
Family outings	*acceptable*	--
Family activities	--	*poor measure*
Social connectedness	single item	single item
Parent-child communication	--	*poor measure*
Discussion of sex with parent(s)	--	single item
Child's religious attendance	--	single item
Discipline Measures		
Parental attitude toward harsh punishment	*poor measure*	*poor measure*
Mother-reported rules and chores	*acceptable*	*acceptable*
Child-reported rules and chores	--	*poor measure*
Child spanked at least once in prior week	single item	single item
Monitoring/supervision	--	*poor measure*
Mother-Partner Measures		
Relationship satisfaction	single item	single item
Conflict	*poor measure*	*poor measure*
Communication	*acceptable*	*acceptable*
Agreement about child	--	single item

Table 5. Mean Family Strengths, Discipline, and Mother-Partner Measures for Children Ages 6-9, by Race/Ethnicity, Weighted

	Means (Standard Deviations)		
	Whites	**Blacks**	**Hispanics**
Family Strengths Measures			
Appreciation	6.5 (3.2)	4.2 (3.3)	4.9 (3.5)
Interviewer-reported parent-child communication	3.5 (1.0)	3.2 (1.2)	3.5 (0.9)
Family discusses TV	0.8 (0.4)	0.7 (0.5)	0.8 (0.4)
Parent report of family outings	1.9 (1.4)	2.1 (1.9)	1.7 (1.5)
Parent report of social connectedness	2.8 (1.3)	2.5 (1.4)	2.6 (1.4)
Discipline Measures			
Parental attitude toward harsh punishment	1.9 (1.1)	2.4 (1.1)	1.9 (1.1)
Mother report of rules and chores	3.0 (1.6)	3.4 (1.6)	2.9 (1.8)
Child spanked at least once in prior week	0.4 (0.5)	0.5 (0.5)	0.4 (0.5)
Mother-Partner Measures			
Relationship satisfaction	1.7 (0.5)	1.5 (0.6)	1.6 (0.6)
Conflict	8.6 (4.3)	10.5 (4.8)	9.1 (5.0)
Communication	2.3 (1.0)	2.0 (1.1)	2.0 (1.2)
Smallest N	1112	117	137

Note: Table values (except N's) are based on weighted data.

Source: Child Trends, Inc. tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988, and 1990 waves.

Table 6. Mean Family Strengths, Discipline, and Mother-Partner Measures for Children Ages 6-9, by Family Structure, Weighted

	Means (Standard Deviations)		
	Continuously Married	Disrupted	Never Married
Family Strengths Measures			
Appreciation	6.2 (3.3)	6.1 (3.4)	4.2 (3.2)
Interviewer-reported parent-child communication	3.5 (1.0)	3.5 (0.9)	3.0 (1.3)
Family discusses TV	0.9 (0.3)	0.8 (0.4)	0.7 (0.5)
Parent report of family outings	1.9 (1.4)	2.0 (1.6)	2.1 (1.8)
Parent report of social connectedness	2.9 (1.2)	2.6 (1.3)	2.6 (1.4)
Discipline Measures			
Parental attitude toward harsh punishment	1.9 (1.2)	2.0 (1.1)	2.3 (1.1)
Mother report of rules and chores	3.1 (1.6)	3.0 (1.6)	3.0 (1.6)
Child spanked at least once in prior week	0.4 (0.5)	0.4 (0.5)	0.5 (0.5)
Mother-Partner Measures	1.8 (0.4)	1.6 (0.6)	1.7 (0.5)
Relationship satisfaction	8.9 (4.3)	8.9 (4.8)	10.6 (4.9)
Conflict	2.3 (1.0)	2.2 (1.1)	2.3 (0.9)
Communication			
Smallest N	907	424	175[2]

Note: 1. Table values (except N's) are based on weighted data.

2. N for mother-partner measures for the never married sub-groups was only 45.

Source: Child Trends, Inc. tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988, and 1990 waves.

Table 7. Mean Family Strengths, Discipline, and Mother-Partner Measures for Children Ages 10-14, by Race/Ethnicity, Weighted

Independent Variables	Means (Standard Deviations)		
	Whites	Blacks	Hispanics
Family Strengths Measures			
Appreciation	6.7 (3.3)	4.4 (3.5)	5.2 (3.8)
Interviewer-reported parent-child communication	3.4 (1.1)	3.0 (1.3)	3.3 (1.1)
Family discusses TV	0.8 (0.4)	0.7 (0.5)	0.8 (0.4)
Parent report of family activities	3.5 (1.7)	3.4 (1.8)	3.5 (1.8)
Parent report of social connectedness	2.5 (1.3)	2.6 (1.3)	2.5 (1.4)
Parent to child communication	3.1 (1.7)	3.3 (1.7)	3.6 (1.9)
Discussion of sex with parent(s)	0.5 (0.9)	0.4 (0.5)	0.4 (0.5)
Child's religious attendance	2.4 (1.8)	2.7 (1.8)	2.3 (2.0)
Discipline Measures			
Parental attitude toward harsh punishment	2.2 (1.1)	2.5 (1.0)	2.2 (1.0)
Mother report of rules and chores	3.5 (2.1)	4.0 (2.2)	4.1 (2.1)
Child report of rules and chores	0.9 (0.8)	1.2 (0.8)	1.1 (0.9)
Child spanked at least once in prior week	0.2 (0.4)	0.2 (0.4)	0.2 (0.4)
Monitoring/supervision	1.6 (0.9)	1.8 (0.9)	1.9 (0.8)
Mother-Partner Measures			
Relationship satisfaction	1.7 (0.5)	1.4 (0.6)	1.6 (0.6)
Conflict	8.9 (4.5)	11.5 (4.9)	8.8 (4.8)
Child reported parental agreement about child	1.6 (0.8)	1.5 (1.9)	1.7 (0.9)
Communication	2.1 (1.1)	1.9 (1.1)	2.1 (1.2)
Smallest N	381	93	56

Note: Table values (except N's) are based on weighted data.

Source: Child Trends, Inc. tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988, and 1990 waves.

Table 8. Mean Family Strengths, Discipline, and Mother-Partner Measures for Children Ages 10-14, by Family Structure, Weighted

	Means (Standard Deviations)		
Independent Variables	**Continuously Married**	**Disrupted**	**Never Married**
Family Strengths Measures			
Appreciation	6.4 (3.5)	5.9 (3.6)	4.8 (3.2)
Interviewer-reported parent-child communication	3.5 (1.0)	3.2 (1.2)	3.5 (1.7)
Family discusses TV	0.9 (0.3)	0.7 (0.4)	0.7 (0.5)
Parent report of family activities	3.4 (1.6)	3.5 (1.7)	3.4 (1.8)
Parent report of social connectedness	2.5 (1.3)	2.6 (1.3)	2.5 (1.4)
Parent to child communication	3.2 (1.6)	3.1 (1.8)	3.5 (1.7)
Discussion of sex with parent(s)	0.5 (0.5)	0.5 (0.5)	0.4 (0.5)
Child's religious attendance	2.7 (1.8)	2.4 (1.9)	2.3 (1.8)
Discipline Measures			
Parental attitude toward harsh punishment	2.2 (1.1)	2.3 (1.1)	2.3 (1.1)
Mother report of rules and chores	3.8 (2.2)	3.7 (2.2)	3.8 (2.0)
Child spanked at least once in prior week	1.0 (0.8)	1.0 (0.8)	1.2 (0.8)
Monitoring/supervision	1.8 (0.8)	1.7 (0.9)	1.7 (0.8)
Mother-Partner Measures			
Relationship satisfaction	1.7 (0.5)	1.6 (0.6)	1.6 (0.6)
Conflict	9.4 (4.4)	9.2 (4.9)	9.7 (5.3)
Child report of rules and chores	1.7 (0.8)	1.4 (0.8)	1.6 (0.9)
Child reported parental agreement about child	0.2 (0.4)	0.2 (0.4)	0.2 (0.4)
Communication	2.1 (1.1)	2.0 (1.1)	2.1 (1.1)
Smallest N	258	207	103[2]

Note: Table values (except N's) are based on weighted data.

Source: Child Trends, Inc. tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988, and 1990 waves.

TABLE 9. Correlations Between Family Strength Indicators among Children Ages 6 to 9.

	APP6B (1)	INTEVAL (2)	TV (3)	OUTING6 (4)	CONNCT6 (5)	HARSH6 (6)	RULES2M6 (7)	MARSAT (8)	CONFLCT2 (9)	COMMNC2 (10)
Family Strengths Measures										
(1) Appreciation (APP6B)	1.00									
(2) Intv.-Reported Communic. (INTVEVAL)	.12***	1.00								
(3) Family Discussion of Television (E7569)	.10***	.10***	1.00							
(4) Parent Report of Family Outings (OUTING6)	.16***	.03*	.07***	1.00						
(5) Parent Report of Social Cnnct. (CONNCT6)	.10***	.07***	.07***	.10***	1.00					
Discipline Measures										
(6) Parental Attitude toward Harsh Punish. (HARSH6)	-.18***	.02	-.01	.00	-.02	1.00				
(7) Mother Report of Rules and Chores (RULES2M6)	.00	-.01	.06***	.06***	.00	.03*	1.00			
Mother-Partner Measures										
(8) Relationship Satisfaction (MARSAT)	.08***	.07***	.13***	.00	.05**	-.08***	.08***	1.00		
(9) Conflict (CONFLCT2)	-.08***	-.04*	-.03	-.02	-.01	.04*	-.06*	-.34***	1.00	
(10) Communication (COMMNC2)	.17***	.14*	.17***	.11***	.07***	-.05*	.10***	.44***	-.25***	1.00

*** $p < 0.01$
** $p < 0.05$
* $p < 0.10$

Note: 1. The number of cases on which correlations were based ranges from 1625 and 2093 except for conflict and parent-partner communication (defined only when the mother has a spouse or partner), which ranged from 1263 to 1430.
2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

TABLE 12. Correlations Between Behavior Problems and Family Strength Indicators among Children Ages 10 to 14.

	Appreciate (APP6B)	Intv.-Rep. Communic. (INTEVAL)	Discuss TV (D7614)	Family Outings (OUTING10)	Social Connect. (CNCT10)	Harsh Punish. (HRSH10)	Rules (RULS2M10)	Marital Satisfac. (MARSAT)	Conflict-Parent (CNFLCT2)	Parents Agree (AGREE)	Parent Communi (CMMNC2
Behavior Problems Index	.03	-.05	-.14***	.03	-.02	.00	-.06*	.00	.08*	-.04	.03
Child-Reported Behavior Problems	-.17***	-.07*	-.13***	.03	-.06*	.03	.05	-.07*	.10**	-.03	.03
SPCC: Scholastic Score	.09**	.12***	.08**	-.02	-.02	.00	.03	-.01	-.09**	.19***	-.10**
SPCC: Self Worth Score	.04	.08**	.08**	-.01	.05*	-.02	.04	.13***	-.04	.08**	.03
BPI:Antisocial Subscale	-.11***	-.04	-.16***	-.03	-.04	.04	.01	-.06	.04	-.02	.01
BPI:Anxious/Depressed Subscale	.03	-.04	-.13***	-.02	-.01	-.03	-.04	-.01	.10**	-.01	-.04
BPI: Headstrong Subscale	.06*	-.08**	-.05	-.05	-.05*	.01	-.03	-.05	.05	-.03	-.02
BPI: Hyperactive Subscale	.04	-.03	-.04	-.05	-.02	.01	-.07	.11**	.07	-.09**	.19***
BPI: Peer Conflicts/ Withdrawal Subscale	-.10***	-.05	-.13***	-.04	-.04	.01	-.03	-.01	.05	-.04	.02

*** p < 0.01
** p < 0.05
* p < 0.10

Note: 1. The number of cases on which correlations were based ranges from 473 to 644 except for the mother-partner measures (defined only when the mother has a spouse or partner), which 353 to 423.
2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

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TABLE 13. Correlations Between Family Strength Indicators among children age 6-9.

	BOYS			GIRLS		
	BPI	SPCC: Scholastic	SPCC: Self Worth	BPI	SPCC: Scholastic	SPCC: Self Worth
Family Strengths Measures						
Appeciation (App6b)	-.10***	.09***	.03	-.12***	.12***	.13***
Intv. Reported Communic. (IntvEval)	-.05*	.04	.07**	.00	.11***	.19***
Family Discussion of Television (E7569)	-.08***	-.03	.00	-.15***	.07**	.11***
Parent Report of Family Outings (Outing6)	-.01	.06**	.00	-.06**	.06**	.06
Parent Report of Social Cnnct. (Connct6)	-.08***	.04	.08**	-.12***	.10***	.13***
Discipline Measures						
Parental Attitude toward Harsh Punishment (Harsh6)	.09***	-.01	-.10***	.15***	-.11***	-.04
Rules and Chores - Mother Report (Rules2m6)	-.09***	-.10***	-.07**	-.07**	.07**	.06
Mother-Partner Measures						
Relationship Satisfaction (MarSat)	-.12***	.03	.09**	-.12***	.09**	.18***
Conflict (Conflct2)	.08**	-.03	-.09**	.05*	-.09**	-.03
Parent to Parent Communication (Commnc2)	-.11***	.18***	.11***	-.12***	.09**	.25***

*** p < 0.01
** p < 0.05
* p < 0.10

Note: 1. The number of cases on which correlations were based ranges from 713 for child-reported chores to 839 (among girls) and 773 to 931 (among boys) for appreciation, except for conflict and parent-partner communication (defined only when the mother has a spouse or partner), which were 529 and 573 for girls, and 593 and 654 for boys, respectively.
2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988 and 1990 Waves.

TABLE 10. Correlations Between Family Strength Indicators among Children Ages 10 to 14.

	APP10B (1)	INTEVAL (2)	TV (3)	FACTIV (4)	CONNCT10 (5)	HARSH10 (6)	RULES2M10 (7)	MARSAT (8)	CONFLCT2 (9)	AGREE (10)	COMMNC2 (11)
Family Strengths Measures											
(1) Appreciation (APP10B)	1.00										
(2) Intv.-Reported Communic. (INTVEVAL)	.19***	1.00									
(3) Family Discussion of Television (D7614)	.25***	.07**	1.00								
(4) Parent Report of Family Activities (FACTIV)	.16***	.02	.05*	1.00							
(5) Parent Report of Social Cnnct. (CONNCT10)	.01	.00	.04	.03	1.00						
Discipline Measures											
(6) Parental Attitude toward Harsh Punish. (HARSH10)	-.15***	.03	.05*	-.03	.04	1.00					
(7) Mother Report of Rules and Chores (RULES2M10)	.09***	-.07**	.03	-.02	.08***	.01	1.00				
Mother-Partner Measures											
(8) Relationship Satisfaction (MARSAT)	.21***	.09**	.04	.07*	-.06*	-.12**	.06*	1.00			
(9) Conflict (CONFLCT2)	-.08**	-.01	-.12***	-.07*	-.01	.15**	.01	-.33**	1.00		
(10) Parental Agreement About Child (AGREE)	.15***	.05	.13***	.19**	.02***	-.05	.04	.17**	-.16***	1.00	
(11) Parent to Parent Communication (COMMNC2)	.24***	.14**	.07*	.06*	-.03	.00	.08**	.52**	-.28***	.12***	1.00

*** p < 0.01
** p < 0.05
* p < 0.10

Note: 1. The number of cases on which correlations were based ranges from 637 to 860 except for the mother-partner measures (defined only when the mother has a spouse or partner), which range from 423 to 533.
2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

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TABLE 11. Correlations Between Behavior Problems and Family Strength Indicators among Children Ages 6 to 9.

	Appreciate (APP6B)	Intv.-Rep Communic. (INTEVAL)	Discuss TV (E7569)	Family Outings (OUTING6)	Social Connect (CONNCT6)	Harsh Punish. (HARSH6)	Rules (RULES2M6)	Marital Satisfac. (MARSAT)	Conflict-Parent (CNFLCT2)	Commun.-Parent (CMMNC2)
Behavior Problems Index	-.11***	-.03*	-.11***	-.04*	-.10***	.11***	-.09***	-.12***	.07***	-.11***
SPCC: Scholastic Score	.11***	.08***	.02	.06***	.07***	-.06***	-.02	.06**	-.06**	.14***
SPCC: Self Worth Score	.07***	.12***	.05**	.03	.10***	-.07***	-.00	.13***	-.06**	.17***
BPI:Antisocial Subscale	-.14***	-.05**	-.11***	-.05**	-.13***	.15***	-.04**	-.07***	.06**	-.09***
BPI:Anxious/Depressed Subscale	-.10***	-.04**	-.11***	-.05**	-.05**	.00	-.04**	-.14***	.05**	-.12***
BPI: Headstrong Subscale	-.03*	-.01	-.07***	-.05***	-.04**	.08***	-.08***	-.11***	.04*	-.11***
BPI: Hyperactive Subscale	-.09***	-.03*	-.08***	-.04**	-.08***	.15***	-.08***	-.10***	.06***	-.07***
BPI: Dependent Subscale	-.04**	.00	-.03*	.03*	-.08***	.02	-.09***	-.05**	.04*	-.04
BPI: Peer Conflicts/ Withdrawal Subscale	-.09***	-.05**	-.12***	-.02	-.13***	.07***	-.02	-.06**	.04*	-.04*

*** $p < 0.01$
** $p < 0.05$
* $p < 0.10$

Note: 1. The number of cases on which correlations were based ranges from 1486 to 1768 except for the mother-partner measures (defined only when the mother has a spouse or partner), which range from 1124 to 1227.
2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

TABLE 14. Correlations Between Family Strengths Indicators and Behavior Problems among Children Ages 10 to 14 by sex.

	BOYS				GIRLS			
	BPI	SPCC: Scholastic	SPCC: Self Worth	Child-Reptd. Behavior Problems	BPI	SPCC: Scholastic	SPCC: Self Worth	Child-Reptd. Behavior Problems
Family Strengths Measures								
Appeciation (APP10B)	.08*	.06	.00	-.12**	-.02	.11**	.08*	-.20***
Interviewer-Reported Communication (INTVEVAL)	-.04	.11**	.11**	.02	-.05	.12**	.06	-.15***
Family Discussion of Television (D7614)	-.16***	.05	.01	-.18***	-.14**	.11**	.11*	-.11**
Child Report of Family Activities (FACTIV)	.02	.09*	.03	.07	-.02	-.02	-.05	-.03
Parent Report of Social Cnnct. (CONNCT10)	-.13***	-.03	.11**	-.16***	.09*	-.02	.01	.03
Discipline Measures								
Parental Attitude toward Harsh Punish. (HARSH10)	.04	.07	-.08*	-.05	-.05	-.04	.00	.11**
Mother Report of Rules and Chores (RULES2M10)	-.04	-.03	.08*	.09	-.08	.07*	.04	.02
Mother-Partner Measures								
Relationship Satisfaction (MARSAT)	-.03	-.02	.24***	-.16**	.00	.01	.04	.01
Conflict (CONFLCT2)	.09	-.04	-.07	.12**	.06	-.17***	-.01	.05
Parental Agreement About Child (AGREE)	.02	.17***	.11**	.00	-.09*	.20**	.07	-.05
Communicaton (COMMNC2)	-.04	-.11*	.17***	-.05	.09*	-.10*	-.08	.11*

*** $p < 0.01$
** $p < 0.05$
* $p < 0.10$

Note: 1. The number of cases on which correlations were based ranges from 244 to 304 among girls and 229 to 324 (among boys) except for the mother-partner measures (defined only when the mother has a spouse or partner), which range from 183 to 212 for girls, and 172 to 211 for boys.
2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

TABLE 15. Correlations Between Family Strengths among Children Ages 6 to 9, by Race.

	WHITES			NON-WHITES		
	BPI	SPCC: Scholastic	SPCC: Self Worth	BPI	SPCC: Scholastic	SPCC: Self Worth
Family Strengths Measures						
Appeciation (APP6B)	-.10***	.11***	.08***	-.16***	.09**	.00
Intv.-Reported Communic. (INTVEVAL)	-.07***	.10***	.15***	.04	.02	.06
Family Discussion of Television (E7569)	-.13***	.13	.03	-.08**	.01	.05
Parent Report of Family Outings (OUTING6)	-.04*	.07***	-.01	-.03	.05	.09**
Parent Report of Social Cnnct. (CONNCT6)	-.09***	.08***	.11***	-.13***	.05	.06*
Discipline Measures						
Parental Attitude toward Harsh Punishment (HARSH6)	.12***	-.10***	-.06**	.10***	.03	-.03
Mother Report of Rules and Chores (RULES2M6)	-.09***	-.06**	-.02	-.07**	.08**	.04
Mother-Partner Measures						
Relationship Satisfaction (MARSAT)	-.15***	.08***	.14***	-.09*	.00	.06
Conflict (CONFLCT2)	.08***	-.07**	-.06**	.08*	-.02	-.02
Communication (COMMNC2)	-.14***	.18***	.20***	-.05	.01	.05

*** p < 0.01
** p < 0.05
* p < 0.10

Note: 1. The number of cases on which correlations were based ranges from 1037 to 1208 (among whites) and 443 to 560 (among non-whites) except for mother-partner measures (defined only when the mother has a spouse or partner), which range from 857 to 945 for whites, and 267 to 282 for non-whites.

2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

TABLE 16. Correlations Between Family Strengths Indicators and Behavior Problems among Children Ages 10 to 14, by Race.

	WHITES				NON-WHITES			
	BPI	SPCC: Scholastic	SPCC: Self Worth	Child-Reptd. Behavior Problems	BPI	SPCC: Scholastic	SPCC: Self Worth	Child Rept Behavior Problems
Family Strengths Measures								
Appeciation (APP10B)	.14***	.00	.04	-.11**	-.13**	.14**	.01	-.15*
Intv.-Reported Communication (INTVEVAL)	-.05	.06	.12**	-.09*	-.04	.14	.03	.00
Family Discussion of Television (D7614)	-.18***	.02	.08*	-.14***	-.10	.14**	-.06	-.11
Child Report of Family Activities (FACTIV)	.06	.01	-.05	.10**	-.07	.07	.03	-.08
Parent Report of Social Cnnct. (CONNCT10)	-.02	-.06	-.01	-.02	-.02	.03	.13**	-.11**
Discipline Measures								
Parental Attitude toward Harsh Punish. (HARSH10)	-.09*	.03	-.05	.02	.12**	.00	.02	.01
Mother Report of Rules and Chores (RULES2M10)	-.01	.00	.06	.07	-.11**	.07	.02	.00
Mother-Partner Measures								
Relationship Satisfaction (MARSAT)	.03	.05	.12**	.07	-.14*	-.17**	.13*	-.23***
Conflict (CONFLCT2)	.08*	-.15***	.01	.07	.11	.07	-.09	.08
Parental Agreement About Child (AGREE)	-.05	.19***	.09*	.02	-.02	.18***	.07	-.08
Communicaton (COMMNC2)	.03	-.08*	.05	.06	.01	-.17**	-.01	-.01

*** $p < 0.01$
** $p < 0.05$
* $p < 0.10$

Note: 1. The number of cases on which correlations were based ranges from 234 to 348 (among whites) and 217 to 296 (among non-whites) except for the mother-partner measures (defined only when the mother has a spouse or partner), which range from 234 to 291 for whites, and 119 to 132 for non-whites.
2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

TABLE 17. Correlations Between Family Strengths among Children Ages 6 to 9, by Family Structure.

	CONTINUOUSLY MARRIED			EVER SEPARATED OR DIVORCED		
	BPI	SPCC: Scholastic	SPCC: Self Worth	BPI	SPCC: Scholastic	SPCC: Self Worth
Family Strengths Measures						
Appeciation (APP6B)	-.10***	.08**	.09***	-.10***	.16***	.03
Intv.-Reported Communic. (INTVEVAL)	-.12***	.10***	.23***	.04	.10**	.07*
Family Discussion of Television (E7569)	-.14***	.03	.07**	-.04	.01	-.00
Parent Report of Family Outings (OUTING6)	-.11***	.12***	.08**	-.02	.03	-.02
Parent Report of Social Cnnct. (CONNCT6)	-.07**	.02	.06*	-.11***	.17***	.10***
Discipline Measures						
Parental Attitude toward Harsh Punishment (HARSH6)	.14***	-.02	-.02	.07*	-.10***	-.07*
Mother Report of Rules and Chores (RULES2M6)	-.09***	-.03	.01	-.12***	.01	.02
Mother-Partner Measures						
Relationship Satisfaction (MARSAT)	-.09***	.06**	.05	-.14***	.06	.12**
Conflict (CONFLCT2)	.08**	-.07**	-.03	.05	-.05	-.05
Communication (COMMNC2)	-.10***	.15***	.19***	-.12**	.11**	.11**

*** p < 0.01
** p < 0.05
* p < 0.10

Note: 1. The number of cases on which correlations were based ranges from 756 to 846 (among continuously married), 533 to 641 (among ever disrupted) and from 149 to 181 among never married except for mother-partner measures (defined only when the mother has a spouse or partner), which range from 771 to 809 for continuously married, and 304 to 327 for ever disrupted, and from 33 to 34 among never married.

2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

TABLE 17. Correlations Between Family Strengths among Children Ages 6 to 9, by Family Structure. Continued

	NEVER MARRIED		
	BPI	SPCC: Scholastic	SPCC: Self Worth
Family Strengths Measures			
Appeciation (APP6B)	.03	.03	-.11*
Intv.-Reported Communic. (INTVEVAL)	.09	-.05	-.03
Family Discussion of Television (E7569)	-.07	-.07	-.04
Parent Report of Family Outings (OUTING6)	.06	.02	.11*
Parent Report of Social Cnnct. (CONNCT6)	-.10*	-.04	.07
Discipline Measures			
Parental Attitude toward Harsh Punishment (HARSH6)	.11*	-.06	-.19**
Mother Report of Rules and Chores (RULES2M6)	-.03	-.03	-.01
Mother-Partner Measures			
Relationship Satisfaction (MARSAT)	-.01	.04	.28*
Conflict (CONFLCT2)	-.16	.21	-.32**
Communication (COMMNC2)	.14	.06	-.05

*** p < 0.01
** p < 0.05
* p < 0.10

Note: 1. The number of cases on which correlations were based ranges from 756 to 846 (among continuously married), 533 to 641 (among ever disrupted) and from 149 to 181 among never married except for mother-partner measures (defined only when the mother has a spouse or partner), which range from 771 to 809 for continuously married, and 304 to 327 for ever disrupted, and from 33 to 34 among never married.

2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

TABLE 18. Correlations Between Family Strengths Indicators and Behavior Problems among Children Ages 10 to 14, by Family Structure

	CONTINUOUSLY MARRIED				EVER SEPARATED OR DIVORCED			
	BPI	SPCC: Scholastic	SPCC: Self Worth	Child-Reptd. Behavior Problems	BPI	SPCC: Scholastic	SPCC: Self Worth	Child Reptd Behavior Problems
Family Strengths Measures								
Appeciation (APP10B)	.08*	-.02	-.00	-.18***	.07	.12**	.10*	-.13**
Family Discussion of Television (D7614)	.02	.08	.11*	-.10*	-.16***	.02	.02	-.11*
Child Report of Family Activities (FACTIV)	-.10*	.05	-.04	.02	.11*	.04	.00	.06
Parent Report of Social Cnnct. (CONNCT10)	.08	-.08	-.13**	-.04	-.10*	-.01	.13**	-.04
Interview-Eval. Parent-Child Commnc. (Int. Eval.)	-.03	-.05	-.04**	-.08	-.10*	.11**	.14**	-.14**
Discipline Measures								
Parental Attitude toward Harsh Punish. (HARSH10)	.04	.03	-.13**	.08	-.06	.07	.05	-.01
Mother Report of Rules and Chores (RULES2M10)	.02	.00	-.01	.12**	.14	.00	.12**	.02
Mother-Partner Measures								
Relationship Satisfaction (MARSAT)	-.06	.03	.19***	-.08	.06	-.01	.07	.04
Conflict (CONFLCT2)	.21***	-.18***	-.07	.13**	-.12*	-.01	.03	.10
Parental Agreement About Child (AGREE)	-.06	.17***	.14**	-.08	.10*	.18***	.01	.12*
Communication (COMMNC2)	-.08	-.06	.04	.17***	.20	-.10	.01	-.06

*** p < 0.01
** p < 0.05
* p < 0.10

Note: 1. The number of cases on which correlations were based ranges from 193 to 247 (among continuously married), 207 to 255 (among ever disrupted) and 72 to 103 (among never married) except for the mother-partner measures (defined only when the mother has a spouse or partner), which range from 133 to 186 for ever disrupted and 17 to 50 for never married.

2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

TABLE 18. Correlations Between Family Strengths Indicators and Behavior Problems among Children Ages 10 to 14, by Family Structure
Continued

	NEVER MARRIED			
	BPI	SPCC: Scholastic	SPCC: Self Worth	Child-Reptd. Behavior Problems
Family Strengths Measures				
Appeciation (APP10B)	-.12	.25***	-.07	-.10
Family Discussion of Television (D7614)	-.29***	.23**	.11	-.13
Child Report of Family Activities (FACTIV)	-.03	.05	.08	-.14
Parent Report of Social Cnnct. (CONNCT10)	-.13	.07	.20**	-.20***
Interview-Eval. Parent-Child Commnc. (Int. Eval.)	.16*	.15*	.05	.01
Discipline Measures				
Parental Attitude toward Harsh Punish. (HARSH10)	-.07	-.12	.00	.02
Mother Report of Rules and Chores (RULES2M10)	-.15*	.15*	-.09	-.03
Mother-Partner Measures				
Relationship Satisfaction (MARSAT)	.26	-.09	.00	-.53***
Conflict (CONFLCT2)	-.55***	.07	-.19	-.07
Parental Agreement About Child (AGREE)	-.05	.22*	-.01	-.14
Communication (COMMNC2)	.28	-.34*	-.13	-.31

*** p < 0.01
** p < 0.05
* p < 0.10

Note: 1. The number of cases on which correlations were based ranges from 193 to 247 (among continuously), 207 to 255 (among ever disrupted) and 72 to 103 (among never married) except for the mother-partner measures (defined only when the mother has a spouse or partner), which range from 133 to 186 for ever disrupted and 17 to 50 for never married.

2. Figures are based on weighted data.

Source: Child Trends, Inc. Tabulations of the NLSY-Child Supplement, 1986, 1988, and 1990 Waves.

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Table 19. Standardized OLS Coefficients for Family Strengths, Discipline, and Mother-Partner Measures in Models Predicting Mother-Reported Behavior Problems in 1990, Children Ages 6-9 in 1988, Weighted

	Without Relationship Measures		With Relationship Measures	
Independent Variables	Family Strengths Only	Family Strengths and Controls	Family Strengths Only	Family Strengths and Controls
Family Strengths Measures				
Appreciation	-.08***	-.09**	-.06	-.07**
Interviewer-reported parent-child communication	-.01	-.03	-.04	-.08**
Family discusses TV	-.10***	-.04***	-.09***	-.03
Parent report of family outings	-.04	-.03	-.08**	-.05
Parent report of social connectedness	.08***	.05**	-.05	-.04
Discipline Measures				
Mother report of rules and chores	.06***	-.04	-.05	-.02
Spank	.17***	.11***	.17***	.13***
Mother-Partner Measures				
Relationship satisfaction	–	–	-.02	.00
Conflict	–	–	.03	-.01
Communication	–	–	-.06*	-.06*
Controls				
Sex	–	-.10***	–	.09**
Age	–	.03	–	.04
Black	–	-.09***	–	-.09***
Hispanic	–	.04	–	-.05*
Mother's education in years	–	.03	–	.07**
Birthweight in ounces	–	.01	–	.02
BPI in 1986	–	.42***	–	.39***
Adjusted net family income in 1988	–	-.01	–	-.03
Number of children in 1988	–	-.02	–	-.03
Mother's age at interview	–	-.02	–	.00
Percent of previous 5 yrs. spent in poverty	–	.05	–	.03
Any handicapping condition	–	.05**	–	.04
No. of yrs. in childcare in 1st 3 yrs. of life	–	-.06**	–	.05
Ever experience divorced/separated	–	.09***	–	.13***
Ever experience death of parent	–	.04	–	.05*
Never married mother	–	.02*	–	.01
R^2	.07	.28	.09	.29
N	1163	1163	860	860

Table 20. Standardized OLS Coefficients for Family Strengths, Discipline, and Mother-Partner Measures in Models Predicting Mother-Reported Behavior Problems in 1990, Children Ages 10-14 in 1988, Weighted

	Without Relationship Measures		With Relationship Measures	
Independent Variables	Family Strengths Only	Family Strengths and Controls	Family Strengths Only	Family Strengths and Controls
Family Strengths Measures				
Appreciation	+.11*	+.11*	.18***	.08
Interviewer-reported parent-child communication	-.03	-.03	-.04	.04
Family discusses TV	-.19***	-.09*	-.20***	-.14**
Parent report of social Connct.	-.05	-.06	-.04	-.12
Discussion of Sex with parents	.06	.03	.11	-.05
Child's Religious Attendance	.12**	.07	.10	.05
Discipline Measures				
Mother report of rules and chores	.09	-.05	-.10	-.06
Spank	.19***	.15***	.19***	.17***
Mother-Partner Measures				
Relationship satisfaction	–	–	-.21**	-.16*
Conflict	–	–	.17**	.14*
Parental Agreement about Child	–	–	.07	.15**
Parent to parent communication	–	–	-.03	.04
Controls				
Sex	–	-.07	–	.15**
Age	–	.04	–	-.03
Black	–	-.05	–	-.04
Hispanic	–	.05	–	-.01
Mother's education in years	–	-.02	–	-.11
Birthweight in ounces	–	.11*	–	.06
BPI in 1986	–	.31***	–	.21***
Adjusted net family income in 1988	–	-.13**	–	-.09
Number of children in 1988	–	-.03	–	-.15*
Mother's age at interview	–	.01	–	-.03
Percent of previous 5 yrs. spent in poverty	–	.00	–	.11
Any handicapping condition	–	.21***	–	.28***
No. of yrs. in childcare in 1st 3 yrs. of life	–	.05	–	.01
Ever experience divorced/separated	–	.15***	–	.11
Ever experience death of parent	–	.00	–	-.02
Never married mother	–	.21***	–	.20***
R^2	.32	.34	.19	.43
N	277	277	187	187

Table 21. Standardized OLS Coefficients for Family Strengths, Discipline, and Mother-Partner Measures in Models Predicting Child-Reported Behavior Problems in 1990, Children Ages 10-14, Weighted

Independent Variables	Without Relationship Measures		With Relationship Measures	
	Family Strengths Only	Family Strengths and Controls	Family Strengths Only	Family Strengths and Controls
Family Strengths Measures				
Appreciation	-.18***	-.14**	-.18**	-.17**
Interviewer-reported parent-child communication	-.06	-.05	-.11	-.05
Family discusses TV	-.16***	-.15***	-.21***	-.21***
Parent report of social connectedness	-.04	-.01	-.12	-.08
Discussion of sex with parent(s)	.14**	.13**	.17**	.09
Child's religious attendance	.03	.02	.01	-.03
Discipline Measures				
Mother report of rules and chores	.03	.02	-.01	-.03
Spank	.17***	.15***	.18***	.14*
Mother-Partner Measures				
Relationship satisfaction	--	--	-.05	.04
Conflict	--	--	.05	-.02
Communication	--	--	.04	.01
Child reported parental agreement about child	--	--	.09	.12
Controls				
Sex	--	-.07	--	-.18**
Age	--	.20***	--	.16*
Black	--	-.13*	--	.00
Hispanic	--	.04	--	-.01
Mother's education in years	--	.10	--	.11
Birthweight in ounces	--	.04	--	.00
BPI in 1986	--	.09	--	.20**
Adjusted net family income in 1988	--	.10	--	.13
Mother's number of children in 1988	--	.05	--	.07
Mother's age at interview	--	.03	--	-.03
Percent of previous 5 yrs. spent in poverty	--	.21**	--	.18*
Child has handicapping condition	--	.08	--	.09
No. of yrs. in childcare in 1st 3 yrs. of life	--	-.06	--	-.03
Parents ever divorced or separated	--	.06	--	.16*
Ever death of parent	--	-.02	--	-.06
Mother never married	--	.12*	--	.18**
R^2	.12	.25	.16	.34
N	274	274	180	180

Table 22. Summary of Multivariate Analyses Predicting Children's Behavior Problems in 1990

	Ages 6 to 9	Ages 10 to 14	
	Mother-reported BPI (Table 19, Col.4)	Mother-reported BPI (Table 20, Col.4)	Child-reported Behavior Problems (Table 21, Col.4)
Family Strengths			
Appreciation	-	o	-
Interviewer-evaluated communication	-	o	o
Family discussion of TV	o	-	-
Family outings	o	na	na
Social connectedness	o	o	o
Discussion of sex with parents(s)	na	o	o
Child's religious attendance	na	o	o
Discipline Measures			
Mother-reported rules and chores	o	o	o
Child spanked at least once in prior week	+	+	+
Mother-Partner Measures			
Relationship satisfaction	o	-	o
Conflict	o	+	o
Agreement about child	na	+	o
Communication	-	o	o

Note; Results are from OLS regression models including all family strength measures available for each age group as well as the following controls: child's sex, age and race ethnicity; birthweight in ounces; number of years spent in child care in the first three years of life; indicator of whether child has handicapping condition; child's BPI score in 1988; mother's educational attainment, age at interview and number of children; family income in 1988; percent of previous five years spent in poverty; indicators for whether parents are divorced/separated, deceased, and never married.

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Table 23. Standardized OLS Coefficients for Family Strengths, Discipline, and Mother-Partner Measures in Models Predicting Mother-Reported Behavior Problems in 1990, Children Ages 6-9 in 1988, Weighted

	Girls		Boys	
Independent Variables	Family Strengths Only	Family Strengths and Controls	Family Strengths Only	Family Strengths and Controls
Family Strengths Measures				
Appreciation	-.05	-.06	-.08	-.10**
Interviewer-reported parent-child communication	.07	-.01	-.08*	-.11**
Family discusses TV	-.15***	-.08*	-.04	.02
Parent report of family outings	-.05	-.06	-.10**	-.04
Parent report of social connectedness	.01	.02	-.07	-.07
Discipline Measures				
Mother report of rules and chores	-.02	-.03	-.04	.01
Spank	.24***	.23***	.14***	.07
Mother-Partner Measures				
Relationship satisfaction	-.01	.04	-.03	-.04
Conflict	-.06	-.07	.10**	.05
Communication	-.15***	-.12**	-.02*	-.02
Controls				
Age	–	.09*	–	.04
Black	–	-.10**	–	-.10**
Hispanic	–	-.06	–	-.03
Mother's education in years	–	.09*	–	.08*
Birthweight in ounces	–	.10**	–	-.05
BPI in 1986	–	.36***	–	.43***
Adjusted net family income in 1988	–	-.05	–	.01
Number of children in 1988	–	-.04	–	-.03
Mother's age at interview	–	-.01	–	-.05
Percent of previous 5 yrs. spent in poverty	–	-.12**	–	-.06
Any handicapping condition	–	.01	–	.05
No. of yrs. in childcare in 1st 3 yrs. of life	–	.12***	–	-.01
Ever experience divorced/separated	–	.15***	–	.11**
Ever experience death of parent	–	.04	–	.01
Never married mother	–	.11**	–	-.01
R^2	.12	.36	.09	.28
N	409	409	451	451

Table 24. Standardized OLS Coefficients for Family Strengths, Discipline, and Mother-Partner Measures in Models Predicting Child-Reported Behavior Problems in 1990, by Children Ages 6-9 in 1988, Weighted

	Continuously Married		Ever Disrupted	
Independent Variables	Family Strengths Only	Family Strengths and Controls	Family Strengths Only	Family Strengths and Controls
Family Strengths Measures				
Appreciation	-.05	-.07*	-.05	-.13***
Interviewer-reported parent-child communication	-.09**	-.12***	.06	.04
Family discusses TV	-.13***	-.03	.00	-.01
Parent report of family outings	-.18***	-.10***	.01	.02
Parent report of social connectedness	.03	.02**	-.11**	-.11***
Discipline Measures				
Mother report of rules and chores	-.08**	-.05	-.10**	-.07
Spank	.21***	.12***	.18***	.10**
Controls				
Sex	--	-.10***	--	-.12***
Age	--	.00	--	.10**
Black	--	-.08**	--	-.13***
Hispanic	--	-.03	--	-.06
Mother's education in years	--	.07*	--	.05
Birthweight in ounces	--	.06*	--	-.02
BPI in 1986	--	.44***	--	.37***
Adjusted net family income in 1988	--	.00	--	-.04
Number of children in 1988	--	-.08**	--	.01
Mother's age at interview	--	-.01	--	-.09*
Percent of previous 5 yrs. spent in poverty	--	-.16***	--	-.06
Any handicapping condition	--	.02	--	.04
No. of yrs. in childcare in 1st 3 yrs. of life	--	.09**	--	-.03
R^2	.13	.36	.07	.26
N	620	620	430	430

Table 25. Standardized OLS Coefficients for Family Strengths, Discipline, and Mother-Partner Measures in Models Predicting Mother-Reported Behavior Problems in 1990, by Sex Children Ages 10-14 in 1988, Weighted

	Girls		Boys	
Independent Variables	Family Strengths Only	Family Strengths and Controls	Family Strengths Only	Family Strengths and Controls
Family Strengths Measures				
Appreciation	-.04	-.18*	.09	.08
Interviewer-reported parent-child communication	-.02	.16	-.10	.06
Family discusses TV	-.38***	-.22	-.14	-.05
Parent report of social connectedness	.39***	-.08	-.26***	-.27***
Discussion of Sex with Parents	-.01	-.26***	-.01	-.24*
Child's Religious Attendance	-.09	-.28***	.19*	.04
Discipline Measures				
Mother report of rules and chores	-.11	-.22	-.08	-.12
Spank	.16	.14*	.11	.02
Mother-Partner Measures				
Relationship satisfaction	-.26*	-.01	-.12	-.11
Conflict	.16	.06	.21**	.06
Parental Agreement about Child	.12	-.02	.21*	.21
Parent to parent communication	-.02	-.15	-.07	-.12
Controls				
Age	–	-.03	–	-.09
Black	–	-.23**	–	.07
Hispanic	–	-.18*	–	-.10
Mother's education in years	–	.51***	–	-.22*
Birthweight in ounces	–	.13	–	-.16
BPI in 1986	–	.70***	–	.37***
Adjusted net family income in 1988	–	.03	–	.26*
Number of children in 1988	–	-.07	–	.01
Mother's age at interview	–	-.26**	–	-.05
Percent of previous 5 yrs. spent in poverty	–	-.02	–	.10
Any handicapping condition	–	.23***	–	-.07
No. of yrs. in childcare in 1st 3 yrs. of life	–	-.08	–	-.08
Ever experience divorced/separated	–	.16	–	.15
Ever experience death of parent	–	a	–	-.06
Never married mother	–	.02	–	-.29***
R^2	.28	.77	.28	.53
N	80	80	98	98

Table 26. Standardized OLS Coefficients for Family Strengths, Discipline, and Mother-Partner Measures in Models Predicting Mother-Reported Behavior Problems in 1990, by Children Ages 10-14 in 1988, Weighted

	Continuously Married		Ever Disrupted	
Independent Variables	Family Strengths Only	Family Strengths and Controls	Family Strengths Only	Family Strengths and Controls
Family Strengths Measures				
Appreciation	.14	.15	.14	.08
Interviewer-reported parent-child communication	-.03	-.06	-.04	-.01
Family discusses TV	-.12	-.04	-.18*	-.12
Parent report of social connectedness	.00	-.03	-.06	-.05
Discussion of Sex with parent	.04	.02	.06	-.01
Child's Religious Attendance	.11	.07	.13	.05
Discipline Measures				
Mother report of rules and chores	-.06	-.14	-.11	-.05
Spank	.22**	.13	.19**	.21**
Controls				
Sex	–	.26***[1]	–	.00
Age	–	-.03	–	.12
Black	–	.09	–	-.09
Hispanic	–	.07	–	-.02
Mother's education in years	–	-.02	–	.04
Birthweight in ounces	–	.13	–	.10
BPI in 1986	–	.26***	–	.35***
Adjusted net family income in 1988	–	-.25**	–	-.11
Number of children in 1988	–	.02	–	-.09
Mother's age at interview	–	-.09	–	.10
Percent of previous 5 yrs. spent in poverty	–	-.07	–	-.07
Any handicapping condition	–	.27***[2]	–	.10
No. of yrs. in childcare in 1st 3 yrs. of life	–	.10	–	-.03
R^2	.09	.37	.12	.33
N	121	121	125	25

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1 8 Gkls who are outliers on BPI 90 were removed.

2 8 Gkls who are outliers on BPI 90 were removed.

Table 27. Standardized OLS Coefficients for Family Strengths, Discipline, and Mother-Partner Measures in Models Predicting Mother-Reported Behavior Problems in 1990, by Children Ages 6-9, in 1988, Weighted

	Whites		Blacks	
Independent Variables	Family Strengths Only	Family Strengths and Controls	Family Strengths Only	Family Strengths and Controls
Family Strengths Measures				
Appreciation	-.06	.02	-.22**	-.13
Interviewer-reported parent-child communication	.01	-.09**	-.02	-.01
Family discusses TV	-.15**	-.06	-.04	-.04
Parent report of family outings	-.11**	-.10***	.07	.08
Parent report of social connectedness	.01	.01	-.05	.06
Discipline Measures				
Mother report of rules and chores	-.03	-.04	.04	.09
Spank	.10**	.03	.31***	.30**
Mother-Partner Measures				
Relationship Satisfaction	-.06	.01	.05	.03
Conflict	.07	.01	.03	.04
Communication	-.08	-.10**	-.10	-.09
Controls				
Sex	–	-.06	–	.02
Age	–	.08**	–	.15
Mother's education in years	–	.11**	–	-.08
Birthweight in ounces	–	-.06	–	-.09
BPI in 1986	–	.48***	–	.39***
Adjusted net family income in 1988	–	-.09**	–	.14
Number of children in 1988	–	.00	–	-.19*
Mother's age at interview	–	-.01	–	.17
Percent of previous 5 yrs. spent in poverty	–	.00	–	-.03
Any handicapping condition	–	.03	–	-.05
No. of yrs. in childcare in 1st 3 yrs. of life	–	.04	–	.11
Ever Experienced Divorce/Separation	–	.18***	–	-.10
Ever Experienced Death of Parent	–	.12***	–	–
Never Married Mother		-.06		.09
R^2	.10	.39	.17	.43
N	506	506	94	94

Table 28. Measures in Models Predicting Mother-Reported Behavior Problems in 1990, by Children Ages 10-14 in 1988, Weighted

	Whites		Blacks	
Independent Variables	Family Strengths Only	Family Strengths and Controls	Family Strengths Only	Family Strengths and Controls
Family Strengths Measures				
Appreciation	.30***	.18**	-.12	-.04
Interviewer-reported parent-child communication	-.03	.01	-.07	-.11
Family discusses TV	-.29***	-.18**	.19	.13
Parent report of social connectedness	.09	.02	.00	.21
Discussion of Sex with parent	.04	-.09	-.06	.35
Child's Religious Attendance	.08	.02	.16	-.01
Discipline Measures				
Mother report of rules and chores	-.05	-.09	-.08	.02
Spank	.28***	.22***	-.02	.15
Mother-Partner Measures				
Relationship Satisfaction	-.22***	.07	-.42	-.34
Conflict	.12	-.03	-.14	.00
Parental Agreement about Child	-.03	.01	.13	.16
Parent to Parent Communication	.00	-.18*	.06	-.11
Controls				
Sex	–	.02	–	.00
Age	–	.00	–	.39
Mother's education in years	–	-.11	–	.22
Birthweight in ounces	–	-.04	–	.13
BPI in 1986	–	.28***	–	.23
Adjusted net family income in 1988	–	-.10	–	-.25
Number of children in 1988	–	.05	–	-.11
Mother's age at interview	–	.09	–	-.53
Percent of previous 5 yrs. spent in poverty	–	-.03	–	.04
Any handicapping condition	–	.34***	–	-.22
No. of yrs. in childcare in 1st 3 yrs. of life	–	-.07	–	.22
Ever Experienced Divorce/Separation	–	.25***	–	-.66
Ever Experienced Death of Parent	–	.03	–	.10
Never Married Mother	—	.13*	–	-.11
R^2	.34	.54	.22	.57
N	156	156	36	36

Appendix A

Coding of Indicators of Well-Functioning Families:
National Longitudinal Survey of Youth--Child Supplement

FAMILY STRENGTHS MEASURES

Appreciation (APP6B, APP10B)

Each index ranges from 0 to 12 measuring the amount of appreciation in 1988 that the mother reports showing to the child. Separate indexes were developed for children ages 6 to 9 (APP6B) and 10 to 14 (APP10B). The distributions for each variable were used to recode them into quintiles and the numbers on the right indicate how many points are added to the appropriate subscale according to their placement. If more than one subscore is missing this variable is coded missing for that respondent.

6 to 9	10 to 14	How many times in the past week have you...
E7592	D7637	shown child physical affection?
E7593	D7638	praised child for doing something worthwhile?
E7594	D7639	told another adult something positive about child?

(Value: no. of times)

First Quintile	= 0
Second Quintile	= 1
Third Quintile	= 2
Fourth Quintile	= 3
Fifth Quintile	= 4

Parent to Child Communication-Interviewer Observed (INTVEVAL)

Index from 0 to 4 measuring the amount and type of communication between parent and child as observed by the interviewer during the 1988 interview. If more than one of the four variables is missing, INTVEVAL is coded to missing; otherwise one point is added for each yes response. Index was created for children 6 to 14 years old.

D7201 Encouraged child to talk
D7202 Answered child's questions verbally
D7203 Voice showed positive feeling about child
D7205 Introduced child to interviewer by name

No	= 0
Yes	= 1

Family Discussion of Television

Dummy variable based on mother report of whether the mother and father figure discuss TV programs with the child. Created for children ages 6 to 14.

6 to 9	10 to 14	
E7569	D7614	When family watches TV together, do you or your child's father figure discuss TV programs with him/her? (If sees father figure)
		No = 0
		Yes = 1

Family Outings (OUTING6, OUTING10)

Each index ranges from 0 to 8 measuring the frequency with which parents take their child on outings. Each scale is created from 2 variables. OUTING6 includes the items for 6 to 9 year olds and OUTING10 includes the items for 10 to 14 year olds. The number to the right indicated the number of points added to their score for each response.

6 to 9	10 to 14		
E7562	E7607	How often has a family member taken child to a museum in past year?	
E7563	E7608	How often has a family member taken child to the theater in past year?	
		Never	0
		Once or twice	1
		Several times	2
		About once a month	3
		About once a week or more often	4

Family Activities (FACTIV)

Index from 0 to 7 measuring the number of different activities the child does with parents (child report, 1988). For each 'yes' response, 1 point is added to the index. If more than one response is missing this variable is set to missing for that respondent. Created for children ages 10 to 14.

	Within the last month, have you and your parents:
D7222	gone to the movies together?
D7223	gone out to dinner?
D7224	gone shopping to get something for you?
D7225	gone on an outing together, like to a museum or sporting event?
	Within the last week, have you and your parents:
D7227	done things together, such as build or making things, cook or sew?
D7228	worked on school work together?
D7229	played a game or sport?

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Social Connectedness (CONNCT6, CONNCT10)

Children's reports of family visits with friends or relatives. Created for children ages 6 to 14.

6 to 9 10 to 14

E7564 D7609 About how often does your whole family get together with relatives or friends?

Once a year or less	= 0
	= 1
	= 2
	= 3
About once a week or more	= 4

Parent to Child Communication (COMMPC2)

Index from 0 to 7 measuring the amount of communication between parent and child reported by children 10 or older in the 1988 interview. The numbers on the right indicate how many points are added to the appropriate final index for each response. If more than one subscore is missing, COMMPC2 is coded to missing. Index was created for children 10 to 14 years old.

D7238 How much say do you have in making up rules?

A lot	3
Some	2
A little	1
None	0

How often does your mother or father:

D7240 talk over important decisions with you?
D7241 listen to your side of an argument?

often	2
sometimes	1
hardly	0

Discuss Sex (SEXINFO)

Dummy variable created for children ages 10 to 14 is coded 1 if they report that they discuss sex with their parents.

E7348 to E7356 Who do you usually talk to about sex?

Mother and/or Father	= 1
Other (Brother, Sister, Grandparent, Aunt, Uncle, other relative, no one)	= 0

Child's Religious Attendance (RELIGC)

Reports of the frequency of religious attendance among children ages 10 to 14.

D7316 In the past year, about how often have you attended religious services?

not at all	0
	1
	2
	3
	4
more than once a week	5

DISCIPLINE MEASURES

Harsh Punishment (HARSH6, HARSH10)

Each index ranges from 0 to 4 measuring the parent's response to how they would handle certain hypothetical situations. HARSH6 is created using items for 6 to 9 year olds and HARSH10 includes items for 10 to 14 year olds. A point is added to the index each time the parent reports that their response would be either grounding or spanking the child. If more than one variable is missing the scale is coded to missing.

6 to 9 10 to 14

Sometimes chidren get so angry at their parents that they say things like "I hate you" or swear in a temper tantrum. Please check which actions you would take if this happened.

D7570 D7615 Grounding
D7571 D7616 Spanking

Grounding or Spanking = 1
Other Responses = 0

If your child brought home a report card with grades lower than expected, how likely would you be to...

D7580 D7625 Lecture the child
D7582 D7627 Punish the child

Not at all likely = 0
At least somewhat likely = 1

Rules and Chores--Mother Report (RULES2M6, RULE2M10)

The index for 6 to 9 year olds ranges from 0 to 5, and the scale for 10 to 14 year olds ranges from 0 to 6. Each measures the different activities the child is expected to do in the home (mother report, 1988). The number to the right indicates how many points are added to the final score for each response. If more than one response is missing the variable is set to missing for that respondent.

6 to 9 Year Olds

How often is your child expected to do each of the following?

E7552	make his/her own bed?
E7553	clean his/her own bed?
E7556	pick up after his/herself?
E7554	clean up after spills?
E7555	bathe himself/herself?

Almost never, < half the time, Half the time, or > half the time	= 0
Almost always	= 1

10 to 14 Year Olds

How often is your child expected to do each of the following?

D7596	make his/her own bed?
D7597	clean his/her own room?
D7598	pick up after his/herself?
D7599	help keep shared living areas straight?
D7600	do routine chores (mow lawns, help with dinner, wash dishes, etc.)
D7601	help manage his/her own time?

Almost never, < half the time, Half the time, or > half the time	= 0
Almost always	= 1

Rules and Chores--Child Report (RULCMEAN)

Index from 0 to 2 measuring the different activities or rules expected of the child (child report, 1988). This was created by adding one point for a 'yes' to the score for each case. This score was then recoded according to the mean and standard deviation of the distribution. If more than one question is missing this variable is set to missing for that respondent. Created for children ages 6 to 14.

In your home, are you regularly expected to help out with:

D7230 straightening your room?
D7231 keeping the rest of the house clean?
D7232 doing the dishes?
D7233 cooking?

In your home, are there any rules about:

D7234 watching TV?
D7235 keeping your parents informed about where you are?
D7236 doing your homework?
D7237 dating and going to parties with boys and girls?

0 to less than (mean - half a std dev.)	= 0
mean +/- half a std dev.	= 1
greater than mean + half a std dev.	= 2

Spanking (SPANK6, SPANK10)

Mother reported frequency of spanking child is recoded into a dummy variable measuring whether they spanked the child at all in the past week. Created for children ages 6 to 14.

6 to 9	10 to 14	
E7587	D7632	How often have you had to spank child in past week?
		Less than once = 0
		At least once = 1

Monitoring/Supervision (MONITOR)

Scale from 0 to 3 measuring the number of different activities for which a parent monitors the behavior of children ages 10 to 14 (child report, 1988). One point is added to the index for each time the child reports that the mother or father makes the decision about the particular issue. If more than one set is missing the variable is coded to missing for that respondent.

Who usually makes the decisions about:

D7250-53 Which friends to go out with?
D7254-57 How late you can stay out?
D7262-65 How much TV you can watch?

You or someone other than mother or father	= 0
Mother or father	= 1

MOTHER-PARTNER MEASURES

Marital Satisfaction (MARSAT)

Mother-reported satisfaction with relationship with husband/partner. Created for children ages 6 to 14; only developed if husband or partner was present.

R2707700 Would you say your (relationship/marriage) is very happy, fairly happy, or not to happy?

Not too happy = 0
Fairly happy = 1
Very happy = 2

Conflict with Partner (CONFLCT2)

Index from 0 to 27 measuring the degree of conflict between mother and partner across nine content areas (parent report, 1988). The number to the right indicates how many points are added to the final scale for each response. If more than one response is missing this variable is set to missing for that respondent. Created for children ages 6 to 14; only created if husband or partner was present.

How frequently do you and your husband/partner have arguments about:

R2708100 Chores
R2708200 Children
R2708300 Money
R2708400 Showing affection
R2708500 Religion
R2708600 Leisure time
R2708700 Drinking
R2708800 Other women
R2708900 Your relatives

Never = 0
Hardly ever = 1
Sometimes = 2
Often = 3

Parental Agreement (AGREE)

Dummy variable created for children ages 10 to 14, coded 1 if they report that their parents tend to agree when dealing with them. Only created if husband or partner was present.

D7270~ In dealing with you, do parents often agree?

No = 0
Yes = 1

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Parent to Parent Communication (COMMNC2)

Index from 0 to 3 measuring the frequency the mother and her husband/partner engage in various types of communication. The number to the right indicates the number of points added to the score for each response. The sum of these was recoded into three categories by collapsing the first six values. If more than one subscore is missing this variable is set to missing for that respondent. Created for children ages 6 to 14; only created if a husband or partner was present.

Frequency respondent and husband/partner:

R2707800	Calmly discuss something	
R2707900	Laugh together	
R2708000	Tell each other about day	
	Almost every day	3
	Once or twice a week	2
	Once or twice a month	1
	Less than once a month	0

CHILD OUTCOMES

Behavior Problems Index (BPI)

A 32 item rating scale for parent report of child behavior problems developed by Zill and Peterson (Zill, 1990). The items comprising the scale were selected because they were not too rare in the general child population; have a demonstrated ability to discriminate children who had received clinical treatment from those who had not; and tapped some of the more common behavior syndromes in young people (e.g. "acting out"). Examples of items in the scale include: whether child bullies or is cruel or mean to others, has a lot of difficulty getting his or her mind off certain thoughts (has obsessions), and has a very strong temper and loses it easily.

Child-Reported Behavior Problems (CRBEHPR)

Index ranging from 86 to 180 is created from child-reported items measuring the frequency of delinquent kinds of behavior. The number to the right indicates the amount added to the score for each response. The items were summed and then standardized to a mean of 100 and standard deviation of 15. If more than one items was missing the entire index was made missing for that respondent. Created for children ages 10 to 14.

In the past year, about how many times have you:

E9423	Stayed out later than your parents said you should	
E9424	Hurt someone badly enough to need bandages or a doctor	
E9425	Lied to parents about something important	
E9426	Taken something from a store without paying for it	
E9427	Damaged school property on purpose	
E9428	Gotten drunk	
E9429	Had to bring your parents to school because of something you did wrong	
E9430	Skipped a day of school without permission	
E9431	Stayed out at least one night without permission	
	Never	= 0
	Once	= 1
	Twice	= 2
	More than twice	= 3

Self Perception Profile for Children (SPPC)

This a self-reported scale that measures a child's sense of general self-worth and self competence in the domain of academic skills (Baker and Mott, 1989). The assessment contains two subscales, a global self-worth score and an academic competence score. Numerous studies have documented the importance of the Self Perception Profile scale as a predictor of important child outcomes and behaviors, for example, achievement motivation.

Appendix B-1. Analysis of Alternative Family Strength Measures among Children Ages 6 to 9.

DESCRIPTIVE STATISTICS

Measures	Number of Component Items	Range	Nominal Midpoint	Actual Mean	Standard Deviation
Appreciation (APPREC6)	3	0 to 230	115.0	27.8	25.19
Appreciation (APP6A)	3	1 to 9	5.0	5.0	1.81
Appreciation (APPRMN6)	3	0 to 6	3.0	2.7	1.44
Intv.-Reported Communic.[1] (INTVOBS)	5	0 to 5	2.5	3.7	1.25
Mother-reported rules (RULESM6)	5	0 to 20	10.0	15.8	4.00
Interparental Conflict 6+ (CONFLICT)	9	0 to 9	4.5	2.9	2.07
Interparental Communic. 6+[2] (COMMNC3)	3	0 to 3	1.5	2.3	0.93

PRINCIPAL COMPONENT ANALYSIS

Measures	Alpha Reliability	Number of Factors Extracted	Percent of Total Variance Accounted for by Each Factor	Percent of Variance in All Factors Accounted for by First Factor	Number of Component Items Loading 30 or More on First Factor	Number of Component Items With Highest Loading on First Factor
Appreciation (APPREC6)	.81	1	77.5	100%	3 of 3	N/A
Appreciation (APP6A)	.79	1	71.5	100%	3 of 3	N/A
Appreciation (APPRMN6)	.76	1	68.4	100%	3 of 3	N/A
Intv.-Reported Communic. (INTVOBS)	.64	2	46.8%,20.2%	70%	4 of 5	4 of 5
Mother-reported rules (RULESM6)	.69	1	49.2%	100%	5 of 5	N/A
Interparental Conflict 6+ (CONFLICT)	.68	3	28.4%,12.7%, 11.8%	54%	9 of 9	6 of 9
Interparental Communic.6+ (COMMNC3)	.63	1	58.1%	100%	3 of 3	N/A

[1] Unrevised, 6-14.

[2] Communic recoded into a collapsed version: COMMUN2 (Range= 0-3 Mean= 2.27 Std. dev.= 1.03).

Source: Child Trends, Inc. Tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988, and 1990 Waves.

Notes: Figures are based on weighted data.

Appendix B-2. Analysis of Alternative Family Strength Measures among Children Ages 10 to 14.

DESCRIPTIVE STATISTICS

Measures	Number of Component Items	Range	Nominal Midpoint	Actual Mean	Standard Deviation
Appreciation (APPREC10)	3	0 to 210	105.0	21.2	22.08
Appreciation (APP10A)	3	1 to 9	4.0	4.5	1.69
Appreciation (APPRMN10)	3	0 to 6	3.0	2.8	1.35
Family Activities at Home (FHOME)	3	0 to 3	1.5	1.5	0.99
Family Outings (FOUTING)	4	0 to 4	2.0	2.0	1.12
Mother-reported rules (RULESM)	6	0 to 24	12.5	19.4	5.08
Interparental Conflict (CONFLICT)	9	0 to 9	4.5	3.1	2.04
Interparental Communic.[1] (COMMUNC3)	3	0 to 3	1.5	2.2	1.00
Intv.-Reported Communic. (INTVOBS)	5	0 to 5	2.5	3.6	1.36

PRINCIPAL COMPONENT ANALYSIS

Measures	Alpha Reliability	Number of Factors Extracted	Percent of Total Variance Accounted for by Each Factor	Percent of Variance in All Factors Accounted for by First Factor	Number of Component Items Loading 30 or More on First Factor	Number of Component Items With Highest Loading on First Factor
Appreciation (APPREC10)	.79	1	74.%	100%	3 of 3	N/A
Appreciation (APP10A)	.76	1	68.5%	100%	3 of 3	N/A
Appreciation (APPRMN10)	.73	1	66.1%	100%	3 of 3	N/A
Family Activities at Home (FHOME)	.37	1	44.4%	100%	3 of 3	N/A
Family Outings (FOUTING)	.48	1	39.0%	100%	4 of 4	N/A
Mother-reported rules (RULESM)	.83	1	57.3%	100%	6 of 6	N/A
Interparental Conflict (CONFLICT)	.68	3	28.4%,12.7%,11.8%	54%	9 of 9	6 of 9
Interparental Communic. (COMMUNC3)	.63	1	58.1%	100%	3 of 3	N/A
Intv.-Reported Communic. (INTVOBS)	.64	2	46.8%,20.2%	70%	4 of 5	4 of 5

[1] Communic recoded into a collapsed version: COMMUN2 (Range= 0-3 Mean= 2.27 Std. dev.= 1.03).

Source: Child Trends, Inc. Tabulations of the National Longitudinal Survey of Youth-Child Supplement, 1986, 1988, and 1990 Waves.

Notes: Figures are based on weighted data.

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